NRO-343-10

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

December 8, 2010

Mr. Bryan Donnelly
Facility Manager
Covanta Alexandria/Arlington
5301 Eisenhower Avenue
Alexandria, Virginia 22304

Dear Mr. Donnelly:

Registration No.: 71895

Attached is a renewal Title V permit to operate your facility pursuant to 9 VAC 5 Chapter 80 of the Virginia Regulations for the Control and Abatement of Air Pollution.

This permit contains legally enforceable conditions. Failure to comply may result in appropriate enforcement. Please read all conditions carefully.

This approval to operate does not relieve Covanta Alexandria/Arlington of the responsibility to comply with all other local, state, and federal permit regulations.

Issuance of this permit is a case decision. The Regulations, at 9 VAC 5-170-200, provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this permit is mailed or delivered to you. Please consult that and other relevant provisions for additional requirements for such requests.

Additionally, as provided by Rule 2A:2 of the Supreme Court of Virginia, you have 30 days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal to court by filing a Notice of Appeal with:

Mr. David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

Event Code: TV	Date	Initials
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QC		

In the event that you receive this permit by mail, three days are added to the period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for additional information including filing dates and the required content of the Notice of Appeal.

If you have any questions concerning this permit, please contact the regional office at 703-583-3858

Sincerely,

Terry Darton
Regional Air Permit Manager

TAF/THD/EHA/10-343-TV

Attachments: Permit
PSD permit dated September 27, 2010
Minor NSR permit dated September 27, 2010
Material Review Process

cc: Manager, Data Analysis (electronic file submission)
Chief, Air Enforcement Branch (3AP13), U.S. EPA, Region III
Manager/Inspector, Air Compliance
File

Virginia Title V Operating Permit

Until such time as this permit is reopened and revised, modified, revoked, terminated or expires, the permittee is authorized to operate in accordance with the terms and conditions contained herein. This permit is issued under the authority of Title 10.1, Chapter 13, §10.1-1322 of the Air Pollution Control Law of Virginia. This permit is issued consistent with the Administrative Process Act and 9 VAC 5-80-50 through 9 VAC 5-80-300 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution of the Commonwealth of Virginia.

Authorization to operate a Stationary Source of Air Pollution as described in this permit is hereby granted to:

Permittee Name:	Covanta Alexandria/Arlington, Inc.
Facility Name:	Covanta Alexandria/Arlington, Inc.
Facility Location:	5301 Eisenhower Ave. Alexandria, Virginia 22304
Registration Number:	71895
Permit Number:	NRO71895

December 8, 2010
Effective Date

December 7, 2015
Expiration Date

Thomas A. Faha
Regional Director, Department of Environmental Quality

December 3, 2010
Signature Date

Table of Contents, 2 pages
Permit Conditions, 66 pages

Table of Contents

I. FACILITY INFORMATION 4

II. EMISSION UNITS 5

III. MUNICIPAL WASTE COMBUSTOR EQUIPMENT REQUIREMENTS – (EMISSION UNITS 001-01, 001-02, 002-01, 002-02, 003-01 AND 003-02) 9

A. LIMITATIONS 9
B. MONITORING 19
C. RECORDKEEPING 23
D. TESTING 28
E. REPORTING 42

IV. REQUIREMENTS FOR STORAGE SILOS– (EMISSION UNITS 004-01, 005-01, AND 007-01) 45

A. LIMITATIONS 45
B. TESTING 45

V. REQUIREMENTS FOR STORAGE TANK– (EMISSION UNIT 006-01) 46

A. RECORDKEEPING 46

VI. FACILITY WIDE CONDITIONS 47

A. REPORTING 47

VII. INSIGNIFICANT EMISSION UNITS 48

VIII. PERMIT SHIELD & INAPPLICABLE REQUIREMENTS 49

IX. GENERAL CONDITIONS 50

A. FEDERAL ENFORCEABILITY 50
B. PERMIT EXPIRATION 50
C. RECORDKEEPING AND REPORTING 51
D. ANNUAL COMPLIANCE CERTIFICATION 52
E. PERMIT DEVIATION REPORTING 52
F. FAILURE/MALFUNCTION REPORTING 53
G. SEVERABILITY 54
H. DUTY TO COMPLY 54
I. NEED TO HALT OR REDUCE ACTIVITY NOT A DEFENSE 54
J. PERMIT MODIFICAITON 54
K. PERMIT ACTION FOR CAUSE 55
L. PROPERTY RIGHTS 55
M. DUTY TO SUBMIT INFORMATION 56
N. DUTY TO PAY PERMIT FEES 56
O. FUGITIVE DUST EMISSION STANDARDS 56
P. STARTUP, SHUTDOWN, AND MALFUNCTION 57
Q. ALTERNATIVE OPERATING SCENARIOS 57
R. INSPECTION AND ENTRY REQUIREMENTS 58

S. REOPENING FOR CAUSE 58
T. PERMIT AVAILABILITY 59
U. TRANSFER OF PERMITS 59
V. MALFUNCTION AS AN AFFIRMATIVE DEFENSE 59
W. PERMIT REVOCATION OR TERMINATION FOR CAUSE 60
X. DUTY TO SUPPLEMENT OR CORRECT APPLICATION 60
Y. STRATOSPHERIC OZONE PROTECTION 60
A. ACCIDENTAL RELEASE PREVENTION 61
AA CHANGES TO PERMITS FOR EMISSIONS TRADING 61
BB. EMISSIONS TRADING 61
CC. CERTIFICATION OF DOCUMENTS 61

I. Facility Information

Permittee
Covanta Alexandria/Arlington, Inc.
5301 Eisenhower Ave.
Alexandria, VA 22304

Responsible Officials
Bryan Donnelly
Facility Manager
(703) 370-7722

Facility
Covanta Alexandria/Arlington, Inc.
5301 Eisenhower Ave.
Alexandria, VA 22304

Contact Person
Bryan Donnelly
Facility Manager
(703) 370-7722

AIRS Identification Number: 51-080-0139

Facility Description: SIC Code 4953 – Municipal solid waste combustion primarily for non-hazardous waste volume reduction. Steam and electricity produced as byproducts.

II. Emission Units

Equipment to be operated consists of:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Municipal Waste Combustor Equipment							
001-01	001	Faber Combustion Unit Model # unknown (Construction Date Feb. 1988)	51.65 million Btu/hr	---	---	---	PSD Permit dated September 27, 2010; Minor NSR Permit dated September 27, 2010
001-02	001	Keeler/Dorr-Oliver municipal waste combustor with Martin stokers Model # MK 325 (Construction Date Feb. 1988)	121.8 million Btu/hr (Based on a higher heating value of 4500 Btu/lb for MSW)	Asea, Brown Boveri (ABB) Environmental Systems fabric filter Model # 266-14	01	Particulate Matter and Lead	PSD Permit dated September 27, 2010; Minor NSR Permit dated September 27, 2010
				ABB Environmental Systems spray tower absorber Field Constructed	02	Sulfur Dioxide	
				Activated Carbon Injection System Field Constructed	03	Mercury	
				Covanta designed Aqueous Ammonia Furnace Injection Field Constructed	13	Nitrogen Oxides (as NO_2)	

002-01	002	Faber Combustion Unit Model # unknown (Construction Date Feb. 1988)	51.65 million Btu/hr	---	---	---	PSD Permit dated September 27, 2010; Minor NSR Permit dated September 27, 2010
002-02	002	Keeler/Dorr-Oliver municipal waste combustor with Martin stokers Model # MK 325 (Construction Date Feb. 1988)	121.8 million Btu/hr (Based on a higher heating value of 4500 Btu/lb for MSW)	Asea, Brown Boveri (ABB) Environmental Systems fabric filter Model # 266-14 ABB Environmental Systems spray tower absorber Field Constructed Activated Carbon Injection System Field Constructed Covanta designed Aqueous Ammonia Furnace Injection Field Constructed	05 06 07 14	Particulate Matter and Lead Sulfur Dioxide Mercury Nitrogen Oxides (as NO_2)	PSD Permit dated September 27, 2010; Minor NSR Permit dated September 27, 2010

003-01	003	Faber Combustion Unit Model # unknown (Construction Date Feb. 1988)	51.65 million Btu/hr	---	---		PSD Permit dated September 27, 2010; Minor NSR Permit dated September 27, 2010
03-02	003	Keeler/Dorr-Oliver municipal waste combustor with Martin stokers Model # MK 325 (Construction Date Feb. 1988)	121.8 million Btu/hr (Based on a higher heating value of 4500 Btu/lb for MSW)	Asea, Brown Boveri (ABB) Environmental Systems fabric filter Model # 266-14 ABB Environmental Systems spray tower absorber Field Constructed Activated Carbon Injection System Field Constructed Covanta designed Aqueous Ammonia Furnace Injection Field Constructed	09 10 11 15	Particulate Matter and Lead Sulfur Dioxide Mercury Nitrogen Oxides (as NO_2)	PSD Permit dated September 27, 2010; Minor NSR Permit dated September 27, 2010

Storage Silos							
004-01	004	Carbon Silo Storage Silo with pneumatic transfer of material (Construction Date Feb. 1988)	2010 ft^3/hr	Fabric Filter	16	Particulate Matter	PSD Permit dated September 27, 2010; Minor NSR Permit dated September 27, 2010
005-01	005	Lime Silo Storage Silo with transfer of lime slurry (Construction Date Feb. 1988)	2548 ft^3/hr	Fabric Filter	17	Particulate Matter	PSD Permit dated September 27, 2010; Minor NSR Permit dated September 27, 2010
007-01	007	Dolomitic Lime Silo Storage Silo with pneumatic transfer of material (Construction Date Dec. 2003)	973 ft^3/hr	Fabric Filter	18	Particulate Matter	Minor NSR permit dated September 27, 2010
Storage Tanks							
006-01	006	Underground Storage Tank for fuel oil (Construction Date Feb. 1988)	20,000 gallons	---	---	---	---

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement

III. Municipal Waste Combustor (MWC) Equipment Requirements – (Emission Units 001-01, 001-02, 002-01, 002-02, 003-01 and 003-02)

A. Limitations

1. Particulate matter emissions from the municipal waste combustors shall be controlled by the use of fabric filters.
(9 VAC 5-80-110, Condition 4 of 09/27/10 PSD Permit, and Condition 2 of 09/27/10 minor NSR Permit)

2. Municipal Solid Waste (MSW) shall be defined as:

   a. Acceptable municipal solid waste includes household waste, commercial/retail waste, institutional waste, and other waste with emission characteristics similar to the acceptable wastes as determined by the permittee and approved by the Regional Air Permit Manager of the DEQ's Northern Regional Office (NRO), or a combination thereof as defined in this condition.

   b. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities.

   c. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, non-manufacturing activities at industrial facilities, and other similar establishments or facilities. All commercial/retail waste shall be mixed with other approved fuels prior to charging to the combustor in order to prevent discreet loads from being charged to a boiler.

   d. Institutional waste includes material discarded by schools, non-medical waste discarded by hospitals, material discarded by non-manufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities.

   e. Municipal solid waste does not include hazardous waste, as defined by federal and state waste regulations.

   f. In addition, municipal solid waste shall not include industrial process or manufacturing waste, used oil, sewage sludge, wood pallets, construction, renovation, and demolition wastes, medical waste, motor vehicles (including motor vehicle parts or vehicle fluff) unless approved via the approved Material Review Process (MRP).

   g. The permittee shall monitor the waste delivered to the facility to ensure that only MSW as defined herein is being processed by the facility.

   h. This definition of MSW may in the future be expanded to include additional waste types not identified in this condition. To facilitate any revision, the permittee shall submit requests in writing to the Regional Air Permit Manager of the DEQ's NRO.

Information on waste composition and emissions characterizations shall be included with any submittal. The request and supporting information will be reviewed and evaluated to determine new source review applicability. The permit will be revised in accordance with the procedures established in the appropriate permitting regulations in the Regulations for the Control and Abatement of Air Pollution.

i. Any waste not classified as hazardous waste, and not covered by the definition of MSW above, shall be reviewed in accordance with the approved MRP (see Appendix A).

(9 VAC 5-80-110, 9 VAC 5-80-1180, and Condition 6 of 09/27/10 mNSR Permit)

3. The approved fuels for the municipal waste combustors are municipal waste and No. 2 fuel oil. Covanta Alexandria/Arlington, Inc. shall not accept hazardous waste for use in the municipal waste combustor. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-110 and Conditions 5 and 6 of 09/27/10 PSD Permit)

4. Number 2 fuel oil shall be used as the primary fuel during start-up conditions.
(9 VAC 5-80-110 and Condition 5 of 09/27/10 PSD Permit)

5. Each municipal waste combustor train design includes a No. 2 fuel oil burner for use in maintaining appropriate municipal waste combustor temperatures.
(9 VAC 5-80-110, 9 VAC 5-170-60 and Condition 8 of 09/27/10 PSD Permit.)

6. The No. 2 fuel oil shall meet the ASTM specification D396-98 for No. 2 fuel oil. The maximum sulfur content per shipment shall not exceed 0.5 weight percent.
(9 VAC 5-80-110 and Condition 6A of 09/27/10 PSD Permit)

7. The approved fuels for the municipal waste combustors are municipal waste and No. 2 fuel oil. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-110 and Condition 6 of 09/27/10 PSD Permit

8. Each of the municipal waste combustors shall not operate at a four-hour average steam load level greater than 110 percent of the maximum demonstrated municipal waste combustor unit load which is the maximum four hour arithmetic average unit load during four consecutive hours achieved during the most recent dioxin/furan test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 9 VAC 5-40-8040, except:

a. During the annual dioxin/furan performance test and the two weeks preceding the annual dioxin/furan performance test, the municipal waste combustor unit load limit is not applicable.

b. The municipal waste combustor unit load limit may be waived in accordance with permission granted by the Board, for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing,

or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(9 VAC 5-80-110, 9 VAC 5-40-8120A, and Condition 15 of 09/27/10 PSD Permit)

9. The annual steam production for the facility shall not exceed 1,170,400 tons on the basis of an average value of 3.34 pounds of steam produced per pound of MSW processed, calculated monthly as the sum of each consecutive 12 month period. (9 VAC 5-170-160, 9 VAC 5-80-110, Condition 14 of 09/27/10 PSD Permit, and Condition 7 of 09/27/10 minor NSR permit)

10. Monthly steam production shall be calculated using the following equation:

    Tons of Steam Produced = (Total monthly pounds of MSW combusted** x 3.34 lbs steam/lb of MSW) ÷ 2000

    **MSW combusted shall be calculated monthly using the following formula:

    MSW combusted = Starting pit inventory + MSW Received – MSW Rejected – Ending pit inventory.

    (9 VAC 5-80-110, 9 VAC 5-80-1180, and Condition 8 of 09/27/10 minor NSR Permit)

11. The four hour average temperature, measured at each particulate matter control device inlet, shall not exceed 17°C (30.6°F) above the maximum demonstrated particulate matter control device inlet temperature which is the highest four hour arithmetic average flue gas temperature measured at the particulate matter control device inlet during the most recent dioxin/furan test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 9 VAC 5-40-8040, except:

    a. During the annual dioxin/furan performance test and the two weeks preceding the annual dioxin/furan performance test, the particulate matter control device temperature limitations are not applicable.

    b. The particulate matter control device temperature limits may be waived, in accordance with permission granted by the Board, for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

    (9 VAC 5-80-110, 9 VAC 5-40-8120B, and Condition 16 of 09/27/10 PSD Permit)

12. The following standards apply to the emissions from each municipal waste combustor:

    a. Particulate Matter: 27 milligrams per dry standard cubic meter, corrected to seven percent oxygen.
    (9 VAC 5-80-110, 9 VAC 5-40-7970, and Condition 9 of 09/27/10 PSD Permit)

b. Carbon Monoxide: 100 parts per million by volume, corrected to seven percent oxygen, dry basis, calculated as an arithmetic average (four hour block average). A four hour block average is defined as the average of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over four hour periods of time from 12:00 midnight to 4 a.m., 4a.m. to 8 a.m., 8 a.m. to 12:00 noon, 12:00 noon to 4 p.m., 4p.m. to 8 p.m., and 8 p.m. to 12:00 midnight.
(9 VAC 5-80-110, 9 VAC 5-40-7890, 9 VAC 5-40-7960C, and Condition 9 of 09/27/10 PSD Permit)

c. Sulfur Dioxide: 29 parts per million by volume or twenty-five percent of the potential sulfur dioxide emission concentration (seventy-five percent reduction by weight or volume), corrected to seven percent oxygen, dry basis, whichever is less stringent. Compliance with this standard is based on a twenty-four hour daily geometric mean. A twenty-four hour daily average is defined as either the arithmetic or geometric mean (as specified) of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over a twenty-four hour period between 12:00 midnight and the following midnight.
(9 VAC 5-80-110, 9 VAC 5-80-8020, and Condition 9 of 09/27/10 PSD Permit)

d. Nitrogen Oxides: 205 parts per million by volume corrected to seven percent oxygen, dry basis, based on a twenty-four hour daily arithmetic average. A twenty-four hour daily average is defined as either the arithmetic or geometric mean (as specified) of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over a twenty-four hour period between 12:00 midnight and the following midnight.
(9 VAC 5-80-110, 9 VAC 5-80-8050, 9 VAC 5-40-7960C, and Condition 9 of 09/27/10 PSD Permit)

e. Hydrogen Chloride: 29 parts per million by volume or five percent of the potential hydrogen chloride emission concentration (ninety-five percent reduction by weight or volume), corrected to seven percent oxygen, dry basis, whichever is less stringent.
(9 VAC 5-80-110, 9 VAC 5-80-8030, and Condition 9 of 09/27/10 PSD Permit)

f. Cadmium: 0.040 milligrams per dry standard cubic meter, corrected to seven percent oxygen.
(9 VAC 5-80-110, 9 VAC 5-40-7990, and Condition 9 of 09/27/10 PSD Permit)

g. Lead: 0.44 milligrams per dry standard cubic meter, corrected to seven percent oxygen.
(9 VAC 5-80-110, 9 VAC 5-40-8000, and Condition 9 of 09/27/10 PSD Permit)

h. Mercury: 0.080 milligrams per dry standard cubic meter or fifteen percent of the potential mercury emission concentration (eighty-five percent reduction by weight), corrected to seven percent oxygen, whichever is less stringent.
(9 VAC 5-80-110, 9 VAC 5-40-8010, and Condition 9 of 09/27/10 PSD Permit)

i. Dioxin/Furan: 30 nanograms per dry standard cubic meter, expressed as total mass dioxins/furans, corrected to seven percent oxygen.
(9 VAC 5-80-110, 9 VAC 5-40-8040, and Condition 9 of 09/27/10 PSD Permit)

13. Emissions from the operation of each municipal waste combustor shall not exceed the limits specified below:

	lb/MMBtu	lbs/hr	tons/yr
Particulate Matter	0.07		12
Particulate Matter 10 (PM_{10})	0.07		12
Sulfur Dioxide	0.14***	16.6***	53
Volatile Organic Compounds	0.006		3.0
Nitrogen Oxides (as NO_2)	0.55		177
Carbon Monoxide	0.56*	68.5*	48.5**
Municipal Waste Combustor Metals (measured as particulate matter & made up of the following:)	6.47×10^{-3}		3.42
Cadmium	2.7×10^{-4}		0.14
Lead	4.4×10^{-3}		2.32
Mercury	1.8×10^{-3}***		0.96
Municipal Waste Combustor Acid Gases (measured as the sum of SO_2 and HCl)	0.48***	58.3***	102
Hydrogen Chloride	0.34***		49
Municipal Waste Combustor Organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans)	1.26×10^{-7}		6.7×10^{-5}
Total Dioxins and Furans	5.05×10^{-8}		2.7×10^{-5}
Beryllium	4.9×10^{-7}****	6.0×10^{-5}****	2.63×10^{-4}
Sulfuric Acid Mist	2.9×10^{-3}		1.54

*Maximum short-term carbon monoxide emission rate.

** Based on an average annual carbon monoxide emission rate of 0.096 lb/MMBtu, calculated monthly as the average of each consecutive twelve month period. Compliance for the consecutive twelve-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding eleven months.

***For HCl, SO_2 and mercury, compliance will be demonstrated on a short-term basis by meeting the lb/MMBtu and lbs/hr emission limits specified in this condition or by the percent removal requirements specified in Condition III.A.11.

****Compliance with the Beryllium limits shall be determined during annual performance testing.

Except for the lb/MMBtu and lb/hr HCl, SO_2 and mercury emission limits, the lb/MMBtu, lbs/hr and tons/yr emission limits in this condition may not be an indicator of compliance with the emission concentration and percent removal standards contained in Condition III.A.11. Annual emissions shall be calculated monthly as the sum of each consecutive twelve month period unless specified otherwise. Compliance for the consecutive twelve-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding eleven months.
(9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280, 9 VAC 5-50-180, 40 CFR 61.32(a), 9 VAC 5-80-110, Condition 10 of 09/27/10 PSD Permit, and Condition 10 of 09/27/10 minor NSR permit)

14. Total emissions from the operation of the municipal waste combustor plant shall not exceed the limits specified below:

Particulate Matter	35.6 tons/yr
PM-10	35.6 tons/yr
Sulfur Dioxide	159 tons/yr
Nitrogen Oxides (as NO_2)	530 tons/yr
Carbon Monoxide	145.5 tons/yr**
Volatile Organic Compounds	9.1 tons/yr
Municipal Waste Combustor Metals (measured as particulate matter & made up of the following:)	10.27 tons/yr
Cadmium	0.43 tons/yr
Lead	6.96 tons/yr
Mercury	2.88 tons/yr
Municipal Waste Combustor Acid Gases (measured as the sum of SO_2 and HCl)	305 tons/yr
Hydrogen Chloride	146 tons/yr
Municipal Waste Combustor Organics Total Dioxins and Furans	8.1×10^{-5} tons/yr
Beryllium	7.89×10^{-4} tons/yr
Sulfuric Acid Mist (H_2SO_4)	4.62 tons/yr

** Based on an average annual carbon monoxide emission rate of 0.096 lb/MMBtu, calculated monthly as the average of each consecutive twelve month period.

The tons/yr emission limits may not be an indicator of compliance with the emission concentration standards contained in Condition III.A.11. Annual emissions shall be calculated monthly as the sum of each consecutive twelve month period unless specified otherwise.

(9 VAC 5-80-110, 9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280, 9 VAC 5-50-180, Condition 11 of 09/27/10 PSD Permit, and Condition 11 of 09/27/10 minor NSR permit)

15. Covanta Alexandria/Arlington shall not cause or permit to be discharged into the atmosphere from any affected facility any gases that exhibit greater than ten percent opacity (six-minute average).

    (9 VAC 5-80-110, 9 VAC 5-40-8060, and Condition 12 of 09/27/10 PSD Permit)

16. Standard for Fugitive Dust/Emissions:

    a. Covanta Alexandria/Arlington, Inc. shall not cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of five percent of the observation period (i.e., nine minutes per three hour period), as determined by Reference Method 22 observations as specified in 9 VAC 5-40-8140H except as provided in sections b. and c. of this condition.

    b. The emission limit specified in section a. of this condition shall not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit specified in section a. of this condition shall cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.

    c. The provisions specified in section a. of this condition shall not apply during maintenance and repair of ash conveying systems.

    (9 VAC 5-80-110, 9 VAC 5-40-8070, and Condition 13 of 09/27/10 PSD Permit)

17. The provisions for startup, shutdown, and malfunction in parts a. and b. of this permit condition apply. Test methods and procedures for determining compliance shall be performed as specified in 9 VAC 5-40-8140. The standards under this permit apply at all times except during periods of startup, shutdown, or malfunction. Duration of startup, shutdown, or malfunction periods are limited to three hours per occurrence except for the purpose of compliance with the carbon monoxide emission limits in 9VAC5-40-7980, if a loss of boiler water level control or a loss of combustion air control is determined to be a malfunction, the duration of the malfunction period is limited to fifteen hours per occurrence.

    a. The startup period commences when the municipal waste combustor unit begins the continuous burning of municipal solid waste and does not include any warm-up period when the municipal waste combustor unit is combusting fossil fuel or other non-municipal solid waste fuel, and no municipal solid waste is being fed to the combustor.

b. Continuous burning is the continuous, semi-continuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period when municipal solid waste is being fed to the grate is not considered to be continuous burning.

c. The selected parameters that define normal operation for the facility is when the dry inlet O_2 is less than or equal to sixteen percent, or steam flow is greater than or equal to 30,000 pounds per hour. If either of these conditions is not met, and CAA has ceased feeding MSW into the combustor, the combustor shall be considered shut down.

(9 VAC 5-80-110, 9 VAC 5-40-8100B and Condition 172 of 09/27/10 PSD Permit)

18. Municipal waste combustor unit capacity shall be calculated based on twenty-four hours of operation at the maximum charging rate. The maximum charging rate shall be calculated based on the maximum design heat input capacity of the unit and a heating value of 10,500 kilojoules per kilogram (4,500 Btu/lb) for combustors firing municipal solid waste that is not refuse-derived fuel.
(9 VAC 5-80-110, 9 VAC 5-40-8100C, and Condition 173 of 09/27/10 PSD Permit)

19. Each chief facility operator and shift supervisor shall obtain and maintain one of the following:

a. A current provisional operator training certification from the American Society of Mechanical Engineers (QRO-1-1994) in conjunction with licensing requirements of the Board for Waste Management Facility Operators as required by 18 VAC 155 Chapter 20 (18 VAC 155-20-10 et seq.); or

b. A license from the Board for Waste Management Facility Operators as required by 18 VAC 155 Chapter 20 (18 VAC 18-20-10 et seq.).

(9 VAC 5-80-110, 9 VAC 5-40-8130A, and Condition 17 of 09/27/10 PSD Permit)

20. Each chief facility operator and shift supervisor shall have:

a. (Satisfactorily) Completed full certification exam with the American Society of Mechanical Engineers (QRO-1-1994) certification program in conjunction with the Board for Waste Management Facility Operators as required by 18 VAC 155 Chapter 20 (18 VAC 155-20-10 et seq.); or

b. Obtained a license from the Board for Waste Management Facility Operators as required by 18 VAC 155 Chapter 20 (18 VAC 155-20-10 et seq.).

(9 VAC 5-80-110, 9 VAC 5-40-8130B, and Condition 18 of 09/27/10 PSD Permit)

21. Covanta Alexandria/Arlington, Inc. shall not allow the municipal waste combustor facility to be operated at any time unless one of the following persons is on duty and at Covanta Alexandria/Arlington, Inc.: A fully certified chief facility operator or a fully

certified shift supervisor. If one of the persons who is responsible for the proper operation of the facility and has a license from the Board for Waste Management Facility Operators in the correct classification must leave Covanta Alexandria/Arlington, Inc. during their operating shift, a provisionally certified control room operator who is onsite at Covanta Alexandria/Arlington, Inc. may fulfill the requirements of this condition.
(9 VAC 5-80-110, 9 VAC 5-40-8130D, and Condition 20 of 09/27/10 PSD Permit).

22. Covanta Alexandria/Arlington, Inc. shall not allow the municipal waste combustor facility to be operated at any time unless a person is on duty who is responsible for the proper operation of the facility and has a license from the Board for Waste Management Facility Operators in the correct classification.
(9 VAC 5-80-110, 9 VAC 5-40-8130C, and Condition 19 of 09/27/10 PSD Permit)

23. All chief facility operators, shift supervisors, and control room operators must (satisfactorily) complete the Virginia State Air Pollution Control Board Approved municipal waste combustor operator training course.

    (9 VAC 5-80-110, 9 VAC 5-40-8130E, and Condition 21 of 09/27/10 PSD Permit)

24. Covanta Alexandria/Arlington, Inc. shall develop and update on a yearly basis a site-specific operating manual that shall, at a minimum, address the elements of municipal waste combustor unit operation specified in sections a. through l. of this condition.

    a. A summary of the applicable standards under this permit;
    b. A description of basic combustion theory applicable to a municipal waste combustor unit;
    c. Procedures for receiving, handling, and feeding municipal solid waste;
    d. Municipal waste combustor unit startup, shutdown, and malfunction procedures;
    e. Procedures for maintaining proper combustion air supply levels;
    f. Procedures for operating the municipal waste combustor unit within the standards established under this permit;
    g. Procedures for responding to periodic upset or off-specification conditions;
    h. Procedures for minimizing particulate matter carryover;
    i. Procedures for handling ash;
    j. Procedures for monitoring municipal waste combustor unit emissions;
    k. Reporting and recordkeeping procedures; and
    l. Approved Standby Emission Reduction Plan required under 9 VAC 5-70-50 for reducing nonattainment emissions during an Air Pollution Episode.

    The operations manual shall include a copy of this permit.

    (9 VAC 5-80-110, 9 VAC 5-40-8130F, 9 VAC 5-170-160 and Conditions 22 and 23 of 09/27/10 PSD Permit)

25. Covanta Alexandria/Arlington, Inc. shall establish a training program to review the operating manual according to the schedule specified in sections a. and b. of this condition with each person who has responsibilities affecting the operation of the facility including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers.

    a. Each person shall undergo initial training no later than the date prior to the day the person assumes responsibilities affecting municipal waste combustor unit operation.

    b. Each person shall repeat the initial training annually, within twelve months of the initial training required by section a. of this condition.

    (9 VAC 5-80-110, 9 VAC 5-40-8130G, and Condition 24 of 09/27/10 PSD Permit)

26. The operating manual shall be kept in a readily accessible location for all persons required to undergo training. The operating manual and records of training shall be available for inspection by the Board upon request.
    (9 VAC 5-80-110, 9 VAC 5-40-8130H, and Condition 25 of 09/27/10 PSD Permit)

27. The permittee shall comply with all the applicable requirements of 9 VAC 5-40-7950 et seq., 40 CFR 61 Subpart C; and the applicable general provisions of 40 CFR 60 and 61.
    (9 VAC 5-80-110, 9 VAC 5-40-7950 et seq.; 40 CFR 61 Subpart C; Subpart A of 40 CFR Part 61, and Condition 9 of 09/27/10 minor NSR Permit)

28. This is not a permit under the Resource Conservation and Recovery Act (RCRA). Questions on the applicability of RCRA can be directed to the Virginia Department of Environmental Quality – Waste Division.
    (9 VAC 5-80-110, 9 VAC 5-170-160 and Condition 178 of 09/27/10 PSD Permit.)

29. Facility or Control Equipment Malfunction - Hazardous Air Pollutant Processes: The processes listed below shall, upon request of the DEQ, shut down immediately if its emissions increase in any amount because of a bypass, malfunction, shutdown or failure of the process or its associated air pollution control equipment. The processes shall not return to operation until it and the associated air pollution control equipment are able to operate in the proper manner:

    - Three MWC, each nominally rated at 121.8 million Btu per hour based on a higher heating value (HHV) of 4,500 Btu/lb for MSW.

    (9 VAC 5-80-110, 9 VAC 5-20-180 F 3 and Condition 182 of 09/27/10 PSD Permit)

30. The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-80-110, 9 VAC 5-20-180 I, Condition 183 of 09/27/10 PSD Permit, and Condition 22 of 09/27/10 minor NSR Permit)

B. **Monitoring**

1. The permittee will monitor the differential pressure drop across each fabric filter on an ongoing basis.
(9 VAC 5-80-110, 9 VAC 5-40-50 H, Condition 114 of 09/27/10 PSD Permit, and Condition 5 of 09/27/10 minor NSR Permit)

2. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring system for opacity. For facilities combusting
municipal-type solid waste, the span value for a continuous monitoring system for measuring opacity shall be between zero and thirty-five percent. The continuous opacity monitor will be used as an indicator of proper operation of the fabric filter.
(9 VAC 5-80-110, 9 VAC 5-40-8150, and Conditions 114 and 115B of 09/27/10 PSD Permit)

3. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous emission monitoring system and record the output of the system for measuring the oxygen or carbon dioxide content of the flue gas at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides emissions are monitored and shall comply with the test procedures and test methods specified in sections a. through f. of this permit condition.

   a. The span value of the oxygen (or carbon dioxide) monitor shall be twenty-five percent oxygen (or carbon dioxide).

   b. All continuous emission monitors for oxygen or carbon dioxide shall be installed, evaluated, and operated in accordance with 40 CFR 60.13.

   c. All continuous emission monitors for oxygen and carbon dioxide shall conform to Performance Specification 3 in appendix B of 40 CFR 60 except for section 2.3 (relative accuracy requirement).

   d. The quality assurance procedures of appendix F of 40 CFR 60 except for section 5.1.1 (relative accuracy test audit) shall apply to the monitor.

   e. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels shall be established during the initial performance test according to the procedures and methods specified in sections i. through iv. of this permit condition. This relationship may be reestablished during performance compliance tests.

i. The fuel factor equation in Reference Method 3B shall be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Reference Method 3, 3A, or 3B, as applicable, shall be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

ii. Samples shall be taken for at least thirty minutes in each hour.

iii. Each sample shall represent a one hour average.

iv. A minimum of three runs shall be performed.

f. The relationship between carbon dioxide and oxygen concentrations that is established in accordance with section e. of this permit condition shall be submitted to the Board as part of the initial performance test report and, if applicable, as part of the annual test report if the relationship is reestablished during the annual performance test.

g. Whenever a continuous emissions monitor is malfunctioning or will be out of service for calibration, maintenance, or repair for a period of time corresponding to or exceeding the respective pollutant monitoring interval, surrogate compliance monitoring of the following parameters shall be implemented with the approval of the Regional Air Compliance Manager of the DEQ's NRO, until such time as the emissions monitor is back in operation:

i. For sulfur dioxide outlet monitor, the permittee shall maintain slurry flow and fuel feed rate at the rate at which it was being fed prior to the malfunction or out of service period. Slurry feed rate and fuel feed rate shall be recorded no less than twice per hour.

ii. For the nitrogen oxide monitor, the permittee shall maintain ammonia injection rate and fuel feed rate at the rate at which it was being fed prior to the malfunction or out of service period. Ammonia injection rate and fuel feed rate shall be recorded no less than twice per hour.

iii. For the carbon monoxide monitor, the permittee shall maintain steam flow and fuel feed rate at the rate at which it was being produced/fed prior to the malfunction or out of service period. Steam flow rate and fuel feed rate shall be recorded no less than twice per hour.

(9 VAC 5-80-110, 9 VAC 5-40-8150B, and Conditions 116 through 123 of 09/27/10 PSD Permit)

4. The procedures specified in Conditions III.B.5 through III.B.15 shall be used for determining compliance with the operating requirements under 9 VAC 5-40-8120. (9 VAC 5-80-110, 9 VAC 5-40-8150C, and Condition 124 of 09/27/10 PSD Permit)

5. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring carbon monoxide at the combustor outlet and record the output of the system and shall follow the procedures and methods specified in sections a. and b. of this permit condition.

a. The continuous emission monitoring system shall be operated according to Performance Specification 4A in appendix B of 40 CFR 60.

b. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 4A in appendix B of 40 CFR 60, carbon monoxide and oxygen (or carbon dioxide) data shall be collected concurrently (or within a thirty to sixty minute period) by both the continuous emission monitors and the test methods specified in sections i. and ii. of this permit condition.

   i. For carbon monoxide, Reference Method 10, 10A, or 10B shall be used.

   ii. For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.

c. The span value of the continuous emission monitoring system shall be 125 percent of the maximum estimated hourly potential carbon monoxide emissions of the municipal waste combustor unit.

(9 VAC 5-80-110, 9 VAC 5-40-8150C.3, and Conditions 126 of 09/27/10 PSD Permit)

6. The four hour block arithmetic average specified in Condition 7 of this Section shall be calculated from one hour arithmetic averages expressed in parts per million by volume corrected to seven percent oxygen (dry basis). The one hour arithmetic averages shall be calculated using the data points generated by the continuous emission monitoring system. At least two data points shall be used to calculate each one hour arithmetic average.
   (9 VAC 5-80-110, 9 VAC 5-40-8150C.4, and Conditions 127 of 09/27/10 PSD Permit)

7. Compliance with the carbon monoxide emission limits in 9 VAC 5-40-7980 shall be determined using a four hour block arithmetic average.
   (9 VAC 5-80-110, 9 VAC 5-40-8150C, and Conditions 125 of 09/27/10 PSD Permit)

8. Covanta Alexandria/Arlington, Inc. may request that compliance with the carbon monoxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in permit Condition III.B.3.f.
   (9 VAC 5-80-110, 9 VAC 5-40-8150C.5 and Conditions 128 of 09/27/10 PSD Permit)

9. The procedures specified in section a. through d. of this condition shall be used to determine compliance with load level requirements under 9 VAC 5-40-8120A.

   a. Covanta Alexandria/Arlington, Inc. with steam generation capability shall install, calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; measure steam (or feedwater) flow in megagrams per hour (or kilopounds per hour) on a continuous basis; and record the output of the monitor. Steam (or feedwater) flow shall be calculated in four hour block arithmetic averages.

   b. The method included in the "American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1 -- 1964 (R1991)" section 4 shall be used for calculating the steam (or feedwater) flow required under section a. of this permit condition. The recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th edition (1971)," chapter 4 shall be followed for design, construction, installation, calibration, and use of nozzles and orifices except as specified in section c. of this permit condition.

   c. Measurement devices such as flow nozzles and orifices are not required to be recalibrated after they are installed.

   d. All signal conversion elements associated with steam (or feedwater flow) measurements must be calibrated according to the manufacturer's instructions before each dioxin/furan performance test, and at least once per year.

   (9 VAC 5-80-110, 9 VAC 5-40-8150C.6, and Conditions 129 of 09/27/10 PSD Permit)

10. To determine compliance with the maximum particulate matter control device temperature requirements under 9 VAC 5-40-8120B, Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a device for measuring on a continuous basis the temperature of the flue gas stream at the inlet to each particulate matter control device utilized by Covanta Alexandria/Arlington, Inc. Temperature shall be calculated in four hour block arithmetic averages.
    (9 VAC 5-80-110, 9 VAC 5-40-8150C.7, and Conditions 130 of 09/27/10 PSD Permit)

11. The maximum demonstrated municipal waste combustor unit load shall be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in 9 VAC 5-40-8040 is achieved. The maximum demonstrated municipal waste combustor unit load shall be the highest four hour arithmetic average load achieved during four consecutive hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved.
    (9 VAC 5-80-110, 9 VAC 5-40-8150C.8, and Conditions 131 of 09/27/10 PSD Permit)

12. For each particulate matter control device employed at Covanta Alexandria/Arlington, Inc., the maximum demonstrated particulate matter control device temperature shall be determined during the initial performance test for dioxins/furans and each

subsequent performance test during which compliance with the dioxin/furan emission limit specified in 9 VAC 5-40-8040 is achieved. The maximum demonstrated particulate matter control device temperature shall be the highest four hour arithmetic average temperature achieved at the particulate matter control device inlet during four consecutive hours during the most recent test during which compliance with the dioxin/furan limit was achieved.

(9 VAC 5-80-110, 9 VAC 5-40-8150C.9, and Conditions 132 of 09/27/10 PSD Permit)

13. At a minimum, valid continuous emission monitoring system hourly averages shall be obtained as specified in sections a. and b. of this condition for seventy-five percent of the operating hours per day for ninety percent of the operating days per calendar quarter that Covanta Alexandria/Arlington, Inc. is combusting municipal solid waste.

    a. At least two data points per hour shall be used to calculate each one hour arithmetic average.

    b. At a minimum, each carbon monoxide one hour arithmetic average shall be corrected to seven percent oxygen on an hourly basis using the one hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

    (9 VAC 5-80-110, 9 VAC 5-40-8150C.10, and Conditions 133 of 09/27/10 PSD Permit)

14. All valid continuous emission monitoring system data must be used in calculating the parameters specified under this section even if the minimum data requirements of permit condition III.B.13 are not met. When carbon monoxide continuous emission data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved by the board or Reference Method 10 to provide, as necessary, the minimum valid emission data.

    (9 VAC 5-80-110, 9 VAC 5-40-8150C.11, and Conditions 134 of 09/27/10 PSD Permit)

15. Quarterly accuracy determinations and daily calibration drift tests for the carbon monoxide continuous emission monitoring system shall be performed in accordance with Procedure 1 in appendix F of 40 CFR 60.

    (9 VAC 5-80-110, 9 VAC 5-40-8150C.12, and Conditions 135 of 09/27/10 PSD Permit)

C. Recordkeeping

1. Covanta Alexandria/Arlington, Inc. shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO. These records shall include, but are not limited to the information specified in permit conditions III.C.2 through III.C.16 as

applicable, for each affected facility. These records shall be on-site for inspection by the DEQ for a period of at least five years.
(9 VAC 5-80-110, 9 VAC 5-40-8160B, 9 VAC 5-50-50, 9 VAC 5-40-50 and Condition 137 of 09/27/10 PSD Permit)

2. Covanta Alexandria/Arlington, Inc. shall maintain the calendar date of each record.
(9 VAC 5-80-110, 9 VAC 5-40-8160B.1, and Condition 138 of 09/27/10 PSD Permit)

3. The emission concentrations and parameters measured using continuous monitoring systems as specified under this condition.

   a. The measurements specified in a(i) through a(iv) of this condition shall be recorded and be available for submittal to the Board or review onsite by an inspector.

      i. All six minute average opacity levels as specified under 9 VAC 5-40-8140.B

      ii. All one hour average sulfur dioxide emission concentrations as specified under 9 VAC 5-40-8140.D

      iii. All one hour average nitrogen oxides emission concentrations as specified under 9 VAC 5-40-8140G.

      iv. All one hour average carbon monoxide emission concentrations, municipal waste combustor unit load measurements, and particulate matter control device inlet temperatures as specified under 9 VAC 5-40-8150C.

   b. The average concentrations and percent reductions, as applicable, specified in permit Conditions III.C.3.b.(i) through III.C.3.b.(iv) shall be computed and recorded, and shall be available for submittal to the Board or review on-site by an inspector.

      i. All twenty-four hour daily geometric average sulfur dioxide emission concentrations and all twenty-four hour daily geometric average percent reductions in sulfur dioxide emissions as specified under 9 VAC 5-40-8140D.

      ii. All twenty-four hour daily arithmetic average nitrogen oxides emission concentrations as specified under 9 VAC 5-40-8140G.

      iii. All four hour block or twenty-four hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under 9 VAC 5-40-8150C.

      iv. All four hour block arithmetic average municipal waste combustor unit load levels and particulate matter control device inlet temperatures as specified under 9 VAC 5-40-8150C.

   (9 VAC 5-80-110, 9 VAC 5-40-8160B.2, and Condition 139 of 09/27/10 PSD Permit)

4. Identification of the calendar dates when any of the average emission concentrations, percent reductions, or operating parameters recorded under b (i) through b (iv) of permit Condition III.C.3, or the opacity levels recorded under a (i) of permit Condition III.C.3 are above the applicable limits, with reasons for such exceedance(s) and a description of corrective actions taken.
(9 VAC 5-80-110, 9 VAC 5-40-8160B.3, and Condition 140 of 09/27/10 PSD Permit)

5. For affected facilities that apply activated carbon for mercury control, the records specified in sections a. through d. of this condition.

   a. The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated as required under 9 VAC 5-40-8140J1.a during all annual performance tests for mercury emissions, with supporting calculations. The average carbon mass feed rate shall be based on a six hour average or the total sampling time of the most recent annual performance test for mercury.

   b. The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated for each hour of operation as required under 9 VAC 5-40-8140J.3.b, with supporting calculations. The average carbon mass feed rate shall be based on a six hour average or the total sampling time of the most recent annual performance test for mercury.

   c. The total carbon usage for each calendar quarter estimated as specified by 9 VAC 5-40-8140J.3, with supporting calculations.

   d. Carbon injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon feed rate (e.g., gravimetric feeder).

   (9 VAC 5-80-110, 9 VAC 5-40-8160B.4, and Condition 141 of 09/27/10 PSD Permit)

6. Identification of the calendar dates for which the minimum number of hours of any of the data specified in sections a. through e. of this condition have not been obtained including reasons for not obtaining sufficient data and a description of corrective actions taken.

   a. Sulfur dioxide emissions data;

   b. Nitrogen oxides emissions data;

   c. Carbon monoxide emissions data;

   d. Municipal waste combustor unit load data; and

   e. Particulate matter control device temperature data.

   (9 VAC 5-80-110, 9 VAC 5-40-8160B.5, and Condition 142 of 09/27/10 PSD Permit)

7. Identification of each occurrence that sulfur dioxide emissions data, nitrogen oxides emissions data, or operational data (i.e., carbon monoxide emissions, unit load, and particulate matter control device temperature) have been excluded from the calculation of average emission concentrations or parameters, and the reasons for excluding the data.
(9 VAC 5-80-110, 9 VAC 5-40-8160B.6, and Condition 143 of 09/27/10 PSD Permit)

8. The results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides (large municipal waste combustors only), and carbon monoxide continuous emission monitoring systems, as required under appendix F of 40 CFR 60, procedure 1.
(9 VAC 5-80-110, 9 VAC 5-40-8160B.7, and Condition 144 of 09/27/10 PSD Permit)

9. The test reports documenting the results of all annual performance tests listed in sections a. and b. of this permit condition shall be recorded along with supporting calculations.

   a. The results of all annual performance tests conducted to determine compliance with the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, sulfuric acid mist, and fugitive ash emission limits.

   b. For all dioxin/furan performance tests recorded under section a. of this permit condition, the maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device temperature (for each particulate matter control device).

   (9 VAC 5-80-110, 9 VAC 5-40-8160B.8, and Condition 145 of 09/27/10 PSD Permit)

10. The records specified in sections a. through c. of this condition.

    a. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been provisionally certified by the American Society of Mechanical Engineers or an equivalent Board-approved certification program as required by 9 VAC 5-40-8130A, including the dates of initial and renewal certifications and documentation of current certification.

    b. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been fully certified by the American Society of Mechanical Engineers or an equivalent Board-approved certification program as required by 9 VAC 5-40-8130B, including the dates of initial and renewal certifications and documentation of current certification.

    c. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have completed the EPA municipal waste combustor operator training course or a Board-approved equivalent course as required by 9 VAC 5-40-8130E, including documentation of training completion.

    (9 VAC 5-80-110, 9 VAC 5-40-8160B.9, and Condition 146 of 09/27/10 PSD Permit)

11. Records showing the names of persons who have completed a review of the operating manual as required by 9 VAC 5-40-8130G, including the date of the initial review and subsequent annual reviews.
(9 VAC 5-80-110, 9 VAC 5-40-8160B.10, and Condition 147 of 09/27/10 PSD Permit)

12. For affected facilities that apply activated carbon for mercury control, identification of the calendar dates when the average carbon mass feed rates recorded under permit Condition III.C.5.b were less than the hourly carbon feed rates estimated during performance tests for mercury emissions and recorded under permit Conditions III.C.5.a, respectively, with reasons for such feed rates and a description of corrective actions taken.
(9 VAC 5-80-110, 9 VAC 5-40-8160B.11, and Condition 148 of 09/27/10 PSD Permit)

13. Since Covanta Alexandria/Arlington, Inc. applies activated carbon for mercury control, identification of the calendar dates when the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate (e.g. gravimetric feed rate) recorded under permit Condition III.C.5.d are below the level(s) estimated during the performance tests as specified in 9 VAC 5-40-8140J.1 and 9 VAC 5-40-8140J.1.b, with reasons for such occurrences and a description of corrective actions taken.
(9 VAC 5-80-110, 9 VAC 5-40-8160B.12 and Condition 149 of 09/27/10 PSD Permit)

14. All records specified under permit Conditions III.C.2 through III.C.18 shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the Board.
(9 VAC 5-80-110, 9 VAC 5-40-8160H, and Condition 168 of 09/27/10 PSD Permit)

15. The continuous emission monitor system records shall be annotated to identify the municipal waste combustor train, dates, light-off and securing times, and average firing rates.
(9 VAC 5-80-110, 9 VAC 5-50-50 and Condition 151 of 09/27/10 PSD Permit)

16. The permittee shall maintain records of the occurrence and duration of any startup, shutdown or malfunction in the operation of the municipal waste combustors; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.
(9 VAC 5-80-110, 40 CFR 60.7(b) and 9 VAC 5-40-50B)

17. The records specified in sections a through d of this condition:

    a. All scale house receipts documenting incoming MSW deliveries and outgoing MSW that has been rejected.

    b. A log of daily pit inventory estimations for each bay (Bays 1 – 5).

    c. Annual steam production using the calculation method in Condition III.A.9 to verify compliance with the ton/yr limitation in Condition II.A.8, calculated monthly as the sum of each consecutive twelve-month period. Compliance for the consecutive twelve-month period shall be demonstrated monthly by adding the

total for the most recently completed calendar month to the individual monthly totals for the preceding eleven months.

d. A copy of the maintenance schedule and records of scheduled and unscheduled maintenance and operator training.

(9 VAC 5-80-110, 9 VAC 5-80-1180, 9 VAC 5-50-50, and Condition 14 of 09/27/10 minor NSR Permit)

D. **Testing**

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is free from cyclonic flow. Test ports shall be provided when requested in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).
(9 VAC 5-80-110, 9 VAC 5-50-30F and Condition 177 of 09/27/10 PSD Permit)

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
VOC	EPA Methods 18, 25, 25a
NO_x	EPA Method 19
SO_2	EPA Method 19
CO	EPA Methods 10, 10a, 10b
PM/PM-10	EPA Method 5
PM2.5	EPA OTM 27, 28, or approved equivalent
Visible Emission	EPA Method 9
Fugitive Ash	EPA Method 22
Dioxin/Furan	EPA Method 23
Hydrogen Chloride	EPA Methods 26, 26a
Cadmium	EPA Method 29
Lead	EPA Method 29
Mercury	EPA Method 29
Beryllium	EPA Method 104 (or Method 103)
Sulfuric Acid Mist	EPA Method 8

Alternative methods as approved by the DEQ on a case-by-case basis may be used. Test methods shall be performed under the direction of persons whose qualifications are acceptable to the DEQ.

(9 VAC 5-80-110, 9 VAC 5-40-30A and 9 VAC 5-40-30B)

Particulate Matter

3. The procedures and test methods specified in Conditions III.D.4 through III.D.13 of this section shall be used to determine compliance with the emission limits for particulate matter and opacity under 9 VAC 5-40-7970 and 9 VAC 5-40-8060 (9 VAC 5-80-110, 9 VAC 5-40-8140B, and Condition 28 of 09/27/10 PSD Permit)

4. Reference Method 1 shall be used to select sampling site and number of traverse points.
(9 VAC 5-80-110, 9 VAC 5-40-8140B.1 and Condition 29 of 09/27/10 PSD Permit)

5. Reference Method 3, 3A, or 3B, as applicable, shall be used for gas analysis.
(9 VAC 5-80-110, 9 VAC 5-40-8140B.2 and Condition 30 of 09/27/10 PSD Permit)

6. Reference Method 5 shall be used for determining compliance with the particulate matter emission limit contained in Condition III.A.11. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 °C +/- 14 °C. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Reference Method 5 run.
(9 VAC 5-80-110, 9 VAC 5-40-8140B.3, and Condition 31 of 09/27/10 PSD Permit)

7. Covanta Alexandria/Arlington, Inc. may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150B.6.
(9 VAC 5-80-110, 9 VAC 5-40-8140B.4, and Condition 32 of 09/27/10 PSD Permit)

8. All performance tests shall consist of a minimum of three test runs. The average of the particulate matter emission concentrations from the three test runs, one of which shall include normal sootblowing operations, shall be used to determine compliance.
(9 VAC 5-80-110, 9 VAC 5-40-8140B.5, 9 VAC 5-40-30E, 40 CFR 60.8 and Condition 33 of 09/27/10 PSD Permit)

9. The procedures and test methods specified in subsections a through d of this condition shall be used when conducting performance tests for particulate matter ($PM_{2.5}$ filterable and $PM_{2.5}$ condensable).

   a. The permittee shall conduct performance tests for particulate matter ($PM_{2.5}$ filterable and $PM_{2.5}$ condensable) from the MWC stacks using EPA Methods 1-5, OTM 027, and OTM 028, or other methods as approved by the DEQ.

   b. Emissions testing of $PM_{2.5}$ shall consist of three one-hour test runs (or other length of time as required by the applicable test method). The average of the three runs shall be reported as the short-term emission rate for the facility.

   c. Testing shall be conducted with the MWC operating at eighty percent or more of its maximum rated capacity.

d. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30.

(9 VAC 5-80-110, 9 VAC 5-80-1200, 9 VAC 5-50-30G, and Condition 12 of 09/27/10 minor NSR permit)

10. Following the date that the initial performance test for particulate matter is completed or is required to be completed under 9 VAC 5-40-8100, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for particulate matter on an annual basis (no more than twelve calendar months following the previous performance test).
(9 VAC 5-80-110, 9 VAC 5-40-8140B.9 and Condition 37 of 09/27/10 PSD Permit)

Opacity

11. In accordance with Conditions III.D.2, Reference Method 9 shall be used for determining compliance with the opacity limit except as provided in 40 CFR 60.11(e).
(9 VAC 5-80-110, 9 VAC 5-40-8140B.6, and Condition 34 of 09/27/10 PSD Permit)

12. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous opacity monitoring system for measuring opacity and shall follow the methods and procedures specified in sections a. through c. of this condition.

    a. The output of the continuous opacity monitoring system shall be recorded on a six minute average basis.

    b. The continuous opacity monitoring system shall be installed, evaluated, and operated in accordance with 40 CFR 60.13 and 9 VAC 5-40-41.

    c. The continuous opacity monitoring system shall conform to Performance Specification 1 in appendix B of 40 CFR 60.

    (9 VAC 5-80-110, 9 VAC 5-40-8140B.8, and Condition 36 of 09/27/10 PSD Permit)

13. Following the date that the initial performance test for opacity is completed or is required to be completed under 9 VAC 5-40-8100, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for opacity on an annual basis (no more than twelve calendar months following the previous performance test) using the test method specified in permit Condition III.D.11.
(9 VAC 5-80-110, 9 VAC 5-40-8140B.10, and Condition 38 of 09/27/10 PSD Permit)

Cadmium and Lead

14. The procedures and test methods specified in Conditions III.D.15 and III.D.31 of this permit shall be used to determine compliance with the emission limits for cadmium and lead under 9 VAC 5-40-7990, 9 VAC 5-40-8000, and 9 VAC 5-40-8010.
(9 VAC 5-80-110, 9 VAC 5-40-8140C, and Condition 39 of 09/27/10 PSD Permit)

15. The procedures and test methods specified in Conditions III.D.16 through III.D.21 of this permit shall be used to determine compliance with the emission limits for cadmium and lead under 9 VAC 5-40-7990 and 9 VAC 5-40-8000.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.1, and Condition 40 of 09/27/10 PSD Permit)

16. Reference Method 1 shall be used for determining the location and number of sampling points.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.1.a and Condition 41 of 09/27/10 PSD Permit)

17. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.1.b, and Condition 42 of 09/27/10 PSD Permit)

18. Reference Method 29 shall be used for determining compliance with the cadmium and lead emission limits. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Reference Method 29 test run for cadmium and lead.
(9 VAC 5-80-110, 9 VAC 5-80-8140C.1.c, 9 VAC 5-80-8140C.1.d, and Conditions 43 and 44 of 09/27/10 PSD Permit)

19. Covanta Alexandria/Arlington, Inc. may request that compliance with the cadmium or lead emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150B.6.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.1.e, and Condition 45 of 09/27/10 PSD Permit)

20. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the cadmium or lead emission concentrations from three test runs or more shall be used to determine compliance for the respective pollutant.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.1.f, and Condition 46 of 09/27/10 PSD Permit)

21. Following the date of the initial performance test or the date on which the initial performance test is required to be completed under 9-VAC 5-40-8100, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for compliance with the emission limits for cadmium and lead on an annual basis (no more than twelve calendar months following the previous performance test).
(9 VAC 5-80-110, 9 VAC 5-40-8140C.1.g, and Condition 47 of 09/27/10 PSD Permit)

Mercury

22. The procedures and test methods specified in Conditions III.D.23 through III.D.31 shall be used to determine compliance with the mercury emission limit under 9 VAC 5-40-8010.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.2, and Condition 48 of 09/27/10 PSD Permit)

23. Reference Method 1 shall be used for determining the location and number of sampling points.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.2.a, and Condition 49 of 09/27/10 PSD Permit)

24. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.2.b, and Condition 50 of 09/27/10 PSD Permit)

25. Reference Method 29 shall be used to determine the mercury emission concentration. The minimum sample volume when using Reference Method 29 for mercury shall be 1.7 cubic meters.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.2.c, and Condition 51 of 09/27/10 PSD Permit)

26. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Reference Method 29 test run for mercury required under permit Condition III.D.25.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.2.d, and Condition 52 of 09/27/10 PSD Permit)

27. The percent reduction in the potential mercury emissions ($\%P_{Hg}$) is computed using the following equation:

$$(\%PHg) = \left(\frac{Ei - Eo}{Ei}\right) x\,100$$

where:
$\%P_{Hg}$ = percent reduction of the potential mercury emissions achieved.

E_i = potential mercury emission concentration measured at the control device inlet, corrected to seven percent oxygen (dry basis).

E_o = controlled mercury emission concentration measured at the mercury control device outlet, corrected to seven percent oxygen (dry basis).

(9 VAC 5-80-110, 9 VAC 5-40-8140C.2.e, and Condition 53 of 09/27/10 PSD Permit)

28. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the mercury emission concentrations or percent reductions from three test runs or more is used to determine compliance.
(9 VAC 5-80-110, 9 VAC 5-80-8140C.2.f, and Condition 54 of 09/27/10 PSD Permit)

29. Covanta Alexandria/Arlington, Inc. may request that compliance with the mercury emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150B.6.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.2.g, and Condition 55 of 09/27/10 PSD Permit)

30. Following the date that the initial performance test for mercury is completed or is required to be completed under 9 VAC 5-40-8100, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for mercury emissions on an annual basis (no more than twelve calendar months from the previous performance test).
(9 VAC 5-80-110, 9 VAC 5-40-8140C.2.i and Condition 57 of 09/27/10 PSD Permit)

31. Covanta Alexandria/Arlington, Inc., where activated carbon injection is used to comply with the mercury emission limit, shall follow the procedures specified in 9 VAC 5-40-8140 J for measuring and calculating carbon usage.
(9 VAC 5-80-110, 9 VAC 5-40-8140C.2.j, and Condition 58 of 09/27/10 PSD Permit)

Beryllium

32. Reference Method 104 or 103 shall be used for determining compliance with the beryllium emission limits. All samples shall be taken over such a period or periods as are necessary to accurately determine the maximum emissions which will occur in any 24-hour period.
(9 VAC 5-80-110E and 40 CFR 61.33)

33. Covanta Alexandria/Arlington, Inc. shall conduct a performance test for compliance with the emission limits for beryllium on an annual basis (no more than twelve calendar months following the previous beryllium performance test).
(9 VAC 5-80-110E)

Sulfur Dioxide

34. The procedures and test methods specified in Conditions III.D.35 through III.D.46 shall be used for determining compliance with the sulfur dioxide emission limit under 9 VAC 5-40-8020.
(9 VAC 5-80-110, 9 VAC 5-40-8140D, and Condition 59 of 09/27/10 PSD Permit)

35. Reference Method 19, section 4.3, shall be used to calculate the daily geometric average sulfur dioxide emission concentration.
(9 VAC 5-80-110, 9 VAC 5-40-8140D.1, and Condition 60 of 09/27/10 PSD Permit)

36. Reference Method 19, section 5.4, shall be used to determine the daily geometric average percent reduction in the potential sulfur dioxide emission concentration.
(9 VAC 5-80-110, 9 VAC 5-40-8140D.2, and Condition 61 of 09/27/10 PSD Permit)

37. Covanta Alexandria/Arlington, Inc. may request that compliance with the sulfur dioxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150B.6.
(9 VAC 5-80-110, 9 VAC 5-40-8140D.3, and Condition 62 of 09/27/10 PSD Permit)

38. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system.
(9 VAC 5-80-110, 9 VAC 5-40-8140D.5, and Condition 64 of 09/27/10 PSD Permit)

39. Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed under 9 VAC 5-40-8100, compliance with the sulfur dioxide emission limit shall be determined based on the twenty-four hour daily

geometric average of the hourly arithmetic average emission concentrations using continuous emission monitoring system outlet data if compliance is based on an emission concentration, or continuous emission monitoring system inlet and outlet data if compliance is based on a percent reduction.
(9 VAC 5-80-110, 9 VAC 5-40-8140D.6, and Condition 65 of 09/27/10 PSD Permit)

40. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in sections a. and b. of this condition, for seventy-five percent of the operating hours per day for ninety percent of the operating days per calendar quarter that Covanta Alexandria/Arlington, Inc. is combusting municipal solid waste.

    a. At least two data points per hour shall be used to calculate each one hour arithmetic average.

    b. Each sulfur dioxide one hour arithmetic average shall be corrected to seven percent oxygen on an hourly basis using the one hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

    (9 VAC 5-80-110, 9 VAC 5-40-8140D.7, and Condition 66 of 09/27/10 PSD Permit)

41. The one hour arithmetic averages required under permit Condition III.D.39 shall be expressed in parts per million corrected to seven percent oxygen (dry basis) and used to calculate the twenty-four hour daily geometric average emission concentrations and daily geometric average emission percent reductions. The one hour arithmetic averages shall be calculated using the data points required in 40 CFR 60.13(e)(2).
    (9 VAC 5-80-110, 9 VAC 5-40-8140D.8, and Condition 67 of 09/27/10 PSD Permit)

42. All valid continuous emission monitoring system data shall be used in calculating average emission concentrations and percent reductions even if the minimum continuous emission monitoring system data requirements of permit Condition III.D.40 are not met.
    (9 VAC 5-80-110, 9 VAC 5-40-8140D.9, and Condition 68 of 09/27/10 PSD Permit)

43. The procedures in 40 CFR 60.13 and 9 VAC 5-40-41.B.2 shall be followed for installation, evaluation, and operation of the continuous emission monitoring system.
    (9 VAC 5-80-110, 9 VAC 5-40-8140D.10, and Condition 69 of 09/27/10 PSD Permit)

44. The continuous emission monitoring system shall be operated according to Performance Specification 2 in appendix B of 40 CFR 60.

    a. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 in appendix B of 40 CFR 60, sulfur dioxide and oxygen (or carbon dioxide) data shall be collected concurrently (or within a thirty to sixty minute period) by both the continuous emission monitors and the test methods specified in sections a.(i) and a.(ii) of this permit condition.

        i. For sulfur dioxide, Reference Method 6, 6A, or 6C shall be used.

ii. For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.

b. The span value of the continuous emissions monitoring system at the inlet to the sulfur dioxide control device shall be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit. The span value of the continuous emission monitoring system at the outlet of the sulfur dioxide control device shall be fifty percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit.

(9 VAC 5-80-110, 9 VAC 5-40-8140D.12, and Condition 71 of 09/27/10 PSD Permit)

45. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 in appendix F of 40 CFR 60.
(9 VAC 5-80-110, 9 VAC 5-40-8140D.13, and Condition 72 of 09/27/10 PSD Permit)

46. When sulfur dioxide emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the Board or Reference Method 19 to provide, as necessary, valid emissions data for a minimum of seventy-five percent of the hours per day that Covanta Alexandria/Arlington, Inc. is operated and combusting municipal solid waste for ninety percent of the days per calendar quarter that Covanta Alexandria/Arlington, Inc. is operated and combusting municipal solid waste.
(9 VAC 5-80-110, 9 VAC 5-40-8140D.14, and Condition 73 of 09/27/10 PSD Permit)

Hydrogen chloride

47. The procedures and test methods specified in Conditions III.D.48 through III.D.53 shall be used for determining compliance with the hydrogen chloride emission limit under 9 VAC 5-40-8030.
(9 VAC 5-80-110, 9 VAC 5-40-8140E, and Condition 74 of 09/27/10 PSD Permit)

48. Reference Method 26 or 26A, as applicable, shall be used to determine the hydrogen chloride emission concentration. The minimum sampling time for Reference Method 26 shall be one hour.
(9 VAC 5-80-110, 9 VAC 5-40-8140E.1, and Condition 75 of 09/27/10 PSD Permit)

49. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Reference Method 26 test run for hydrogen chloride required by permit Condition III.D.48.
(9 VAC 5-80-110, 9 VAC 5-40-8140E.2, and Condition 76 of 09/27/10 PSD Permit)

50. The percent reduction in potential hydrogen chloride emissions (% P_{HCl}) is computed using the following equation:

$$(\%PHCl) = \left(\frac{Ei - Eo}{Ei}\right) x\,100$$

where:

$\%P_{HCl}$ = percent reduction of the potential hydrogen chloride emissions achieved.

E_i = potential hydrogen chloride emission concentration measured at the control device inlet, corrected to seven percent oxygen (dry basis).

E_o = controlled hydrogen chloride emission concentration measured at the control device outlet, corrected to seven percent oxygen (dry basis).

(9 VAC 5-80-110, 9 VAC 5-40-8140E.3, and Condition 77 of 09/27/10 PSD Permit)

51. Covanta Alexandria/Arlington, Inc. may request that compliance with the hydrogen chloride emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150B.6.
(9 VAC 5-80-110, 9 VAC 5-40-8140E.4, and Condition 78 of 09/27/10 PSD Permit)

52. All performance tests shall consist of a minimum of three test runs. The average of the hydrogen chloride emission concentrations or percent reductions from the three test runs is used to determine compliance.
(9 VAC 5-80-110, 9 VAC 5-40-8140E.5, 9 VAC 5-40-30, 40 CFR 60.8 and Condition 79 of 09/27/10 PSD Permit)

53. Following the date that the initial performance test for hydrogen chloride is completed or is required to be completed under 40 CFR 60.8, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for hydrogen chloride emissions on an annual basis (no more than twelve calendar months following the previous performance test).
(9 VAC 5-80-110, 9 VAC 5-40-8140E.7, and Condition 81 of 09/27/10 PSD Permit)

Dioxin/Furan

54. The procedures and test methods specified in Conditions III.D.55 through III.D.61 shall be used to determine compliance with the limits for dioxin/furan emissions under 9 VAC 5-40-8040.
(9 VAC 5-80-110, 9 VAC 5-40-8140F, and Condition 82 of 09/27/10 PSD Permit)

55. Reference Method 1 shall be used for determining the location and number of sampling points.
(9 VAC 5-80-110, 9 VAC 5-40-8140F.1, and Condition 83 of 09/27/10 PSD Permit)

56. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
(9 VAC 5-80-110, 9 VAC 5-40-8140F.2, and Condition 84 of 09/27/10 PSD Permit)

57. Reference Method 23 shall be used for determining the dioxin/furan emission concentration.

    a. The minimum sample time shall be four hours per test run.

    b. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Reference Method 23 test run for dioxins/furans.

    (9 VAC 5-80-110, 9 VAC 5-40-8140F.3, and Condition 85 of 09/27/10 PSD Permit)

58. Following the date that the initial performance test for dioxins/furans is completed or is required to be completed under 9 VAC 5-40-8100, Covanta Alexandria/Arlington, Inc. shall conduct performance tests for dioxin/furan emissions in accordance with permit Condition III.D.54, according to one of the schedules in sections a. and b. of this permit condition.

    a. For affected facilities, performance tests shall be conducted on an annual basis (no more than twelve calendar months following the previous performance test).

    b. Where all performance tests over a two year period indicate that dioxin/furan emissions are less than or equal to fifteen nanograms per dry standard cubic meter (total mass) for all affected facilities located within a municipal waste combustor plant, the owner of the municipal waste combustor plant may elect to conduct annual performance tests for one affected facility (i.e., unit) per year at the municipal waste combustor plant. At a minimum, a performance test for dioxin/furan emissions shall be conducted annually (no more than twelve months following the previous performance test) for one affected facility at the municipal waste combustor plant. Each year a different affected facility at the municipal waste combustor plant shall be tested, and the affected facilities at the plant shall be tested in sequence (e.g., unit 1, unit 2, unit 3, as applicable). If each annual performance test continues to indicate a dioxin/furan emission level less than or equal to fifteen nanograms per dry standard cubic meter (total mass), the owner may continue conducting a performance test on only one affected facility per year. If any annual performance test indicates a dioxin/furan emission level greater than fifteen nanograms per dry standard cubic meter (total mass), performance tests thereafter shall be conducted annually on all affected facilities at the plant until and unless all annual performance tests for all affected facilities at the plant over a two year period indicate a dioxin/furan emission level less than or equal to fifteen nanograms per dry standard cubic meter (total mass).

    (9 VAC 5-80-110, 9 VAC 5-40-8140F.5, and Condition 87 of 09/27/10 PSD Permit)

59. If Covanta Alexandria/Arlington, Inc. elects to follow the performance testing schedule specified in permit Conditions III.D.58.a or III.D.58.b above, Covanta Alexandria/Arlington, Inc. shall follow the procedures for reporting the selection of this schedule as specified in 9 VAC 5-40-8160D.4.
    (9 VAC 5-80-110, 9 VAC 5-40-8140F.6, and Condition 88 of 09/27/10 PSD Permit)

60. Covanta Alexandria/Arlington, Inc. may request that compliance with the dioxin/furan

emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150B.6.
(9 VAC 5-80-110, 9 VAC 5-40-8140F.8, and Condition 90 of 09/27/10 PSD Permit)

61. All performance tests shall consist of a minimum of three test runs. The average of the dioxin/furan emission concentrations from the three test runs is used to determine compliance.
(9 VAC 5-80-110, 9 VAC 5-40-8140F.9, 9 VAC 5-40-30, 40 CFR 60.8 and Condition 91 of 09/27/10 PSD Permit)

Nitrogen Oxides

62. The procedures and test methods specified in Conditions 63 through 73 shall be used to determine compliance with the nitrogen oxides emission limit for affected facilities under 9 VAC 5-40-8050.
(9 VAC 5-80-110, 9 VAC 5-40-8140G, and Condition 92 of 09/27/10 PSD Permit)

63. Reference Method 19, section 4.1, shall be used for determining the daily arithmetic average nitrogen oxides emission concentration.
(9 VAC 5-80-110, 9 VAC 5-40-8140G.1, and Condition 93 of 09/27/10 PSD Permit)

64. Covanta Alexandria/Arlington, Inc. may request that compliance with the nitrogen oxides emission limit be determined using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150B.6.
(9 VAC 5-80-110, 9 VAC 5-40-818140G.2, and Condition 94 of 09/27/10 PSD Permit)

65. Covanta Alexandria/Arlington, Inc. is subject to the nitrogen oxides emission limit under 9 VAC 5-40-8050 and shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring nitrogen oxides discharged to the atmosphere, and record the output of the system.
(9 VAC 5-80-110, 9 VAC 5-40-8140G.4, and Condition 96 of 09/27/10 PSD Permit)

66. Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed under 9 VAC 5-40-8100, compliance with the emission limit for nitrogen oxides required under 9 VAC 5-40-8050 shall be determined based on the twenty-four hour daily arithmetic average of the hourly emission concentrations using continuous emission monitoring system outlet data.
(9 VAC 5-80-110, 9 VAC 5-40-8140G.5, and Condition 97 of 09/27/10 PSD Permit)

67. At a minimum, valid continuous emission monitoring system hourly averages shall be obtained as specified in sections a. and b. of this condition for seventy-five percent of the operating hours per day for ninety percent of the operating days per calendar quarter that Covanta Alexandria/Arlington, Inc. is combusting municipal solid waste.

a. At least two data points per hour shall be used to calculate each one hour arithmetic average.

b. Each nitrogen oxides one hour arithmetic average shall be corrected to seven percent oxygen on an hourly basis using the one hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(9 VAC 5-80-110, 9 VAC 5-40-8140G.6, and Condition 98 of 09/27/10 PSD Permit)

68. The one hour arithmetic averages required by permit Condition III.D.63 shall be expressed in parts per million by volume (dry basis) and used to calculate the twenty-four hour daily arithmetic average concentrations. The one hour arithmetic averages shall be calculated using the data points required in 40 CFR 60.13(e)(2). (9 VAC 5-80-110, 9 VAC 5-40-8140G.7, and Condition 99 of 09/27/10 PSD Permit)

69. All valid continuous emission monitoring system data must be used in calculating emission averages even if the minimum continuous emission monitoring system data requirements of permit Condition III.D.67 are not met.
(9 VAC 5-80-110, 9 VAC 5-40-8140G.8, and Condition 100 of 09/27/10 PSD Permit)

70. The procedures in 40 CFR 6.13 and 9 VAC 5-40-41.B.2 shall be followed for installation, evaluation, and operation of the continuous emission monitoring system. The initial performance evaluation shall be completed as specified in 9 VAC 5-40-8100.
(9 VAC 5-80-110, 9 VAC 5-40-8140G.9, and Condition 101 of 09/27/10 PSD Permit)

71. Covanta Alexandria/Arlington, Inc. shall operate the continuous emission monitoring system according to Performance Specification 2 in appendix B of 40 CFR 60 and shall follow the procedures and methods as follows:

a. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 of appendix B of 40 CFR 60, nitrogen oxides and oxygen (or carbon dioxide) data shall be collected concurrently (or within a thirty to sixty minute period) by both the continuous emission monitors and the test methods specified in sections a.(i) and a.(ii) of this permit condition.

i. For nitrogen oxides, Reference Method 7, 7A, 7C, 7D, or 7E shall be used.

ii. For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.

b. The span value of the continuous emission monitoring system shall be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of the municipal waste combustor unit.

(9 VAC 5-80-110, 9 VAC 5-40-8140G.10, and Condition 102 of 09/27/10 PSD Permit)

72. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with Procedure 1 in appendix F of 40 CFR 60.
(9 VAC 5-80-110, 9 VAC 5-40-8140G.11, and Condition 103 of 09/27/10 PSD Permit)

73. When nitrogen oxides continuous emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved by the Board or Reference Method 19 to provide, as necessary, valid emissions data for a minimum of seventy-five percent of the hours per day for ninety percent of the days per calendar quarter the unit is operated and combusting municipal solid waste.
(9 VAC 5-80-110, 9 VAC 5-40-8140G.12, and Condition 104 of 09/27/10 PSD Permit)

Fugitive Ash

74. Reference Method 22 shall be used for determining compliance with the fugitive ash emission limit under 9 VAC 5-40-8070. The minimum observation time shall be a series of three one hour observations. The observation period shall include times when the facility is transferring ash from the municipal waste combustor unit to the area where ash is stored or loaded into containers or trucks.
(9 VAC 5-80-110, 9 VAC 5-40-8140H.1, and Condition 106 of 09/27/10 PSD Permit)

75. The average duration of visible emissions per hour shall be calculated from the three one-hour observations. The average shall be used to determine compliance with 9 VAC 5-40-8070.
(9 VAC 5-80-110, 9 VAC 5-40-8140H.2, and Condition 107 of 09/27/10 PSD Permit)

76. Following the date that the initial performance test for fugitive ash emissions is completed or is required to be completed under 9 VAC 5-40-8100 for an affected facility, the owner shall conduct a performance test for fugitive ash emissions on an annual basis (no more than twelve calendar months following the previous performance test).
(9 VAC 5-80-110, 9 VAC 5-40-8140H.4, and Condition 109 of 09/27/10 PSD Permit)

Carbon Mass

77. Since activated carbon injection is used at Covanta Alexandria/Arlington, Inc. to comply with the mercury emission limit under 9 VAC 5-40-8010 or the dioxin/furan emission limits under 9 VAC 5-40-8040, or the dioxin/furan emission level specified in 9 VAC 5-40-8140F.5.b, Covanta Alexandria/Arlington, Inc. shall follow the procedures specified in Conditions III.D.78 through III.D.80.
(9 VAC 5-80-110, 9 VAC 5-40-8140J, and Condition 110 of 09/27/10 PSD Permit)

78. During the performance tests for dioxins/furans and mercury, as applicable, the owner shall estimate an average carbon mass feed rate based on carbon injection system operating parameters such as the gravimetric feed rate, hopper volume, hopper refill frequency, or other parameters appropriate to the feed system being

employed, as specified below:

An average carbon mass feed rate in kilograms per hour or pounds per hour shall be estimated during the initial performance test for mercury emissions and each subsequent performance test for mercury emissions. The average carbon mass feed rate shall be based on a six hour average or the total sampling time of the most recent annual performance test for mercury.

(9 VAC 5-80-110, 9 VAC 5-40-8140J.1, and Condition 111 of 09/27/10 PSD Permit)

79. During operation of Covanta Alexandria/Arlington, Inc., the carbon injection system operating parameter(s) that are the primary indicator(s) of the carbon mass feed rate (e.g., gravimetric feeder setting) must equal or exceed the level(s) documented during the performance tests specified under permit Condition III.D.78.a.
(9 VAC 5-80-110, 9 VAC 5-40-8140J.2, and Condition 112 of 09/27/10 PSD Permit)

80. Covanta Alexandria/Arlington, Inc. shall estimate the total carbon usage of the plant (kilograms or pounds) for each calendar quarter by two independent methods, according to the procedures in sections a. and b. of this permit condition.

    a. The weight of carbon delivered to the plant.

    b. Estimate the average carbon mass feed rate in kilograms per hour or pounds per hour for each hour of operation for each affected facility based on the parameters specified under permit Condition III.D.78, and sum the results for all affected facilities at the plant for the total number of hours of operation during the calendar quarter.

    (9 VAC 5-80-110, 9 VAC 5-40-8140J.3, and Condition 113 of 09/27/10 PSD Permit)

Sulfuric Acid Mist

81. The procedures and test methods specified in subsections a through d of this condition shall be used when conducting performance tests for sulfuric acid mist (H_2SO_4) to demonstrate compliance with the emission limits contained in this permit.

    a. The permittee shall conduct performance tests for sulfuric acid mist (H_2SO_4) from the MWC stacks using EPA Methods 1-5 and EPA Method 8, or other methods as approved by the DEQ.

    b. Emissions testing of sulfuric acid mist (H_2SO_4) shall consist of a minimum of three one-hour test runs (or other length of time as required by the applicable test method). The average of the three runs shall be reported as the short-term emission rate for the facility.

    c. Testing shall be conducted with the MWC operating at eighty percent or more of its maximum rated capacity.

d. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30.

(9 VAC 5-80-110, 9 VAC 5-80-1200, 9 VAC 5-50-30G, and Condition 12 of 03/16/10 minor NSR permit)

E. **Reporting**

1. Annual emissions and a certification of compliance with the facility annual permit mass emission limitations utilizing a combination of steam production data, CEMS data, and results of stack testing shall be included in Covanta Alexandria/Arlington, Inc.'s annual report.
(9 VAC 5-80-110, 9 VAC 5-50-50 and Condition 157 of 09/27/10 PSD Permit)

2. Covanta Alexandria/Arlington, Inc. shall demonstrate compliance in its annual report with all the lb/MMBtu and lb/hr mass emission limitations, or for HCl, SO_2 and HG the percent removal requirements utilizing a combination of steam production data, CEMS data, and results of stack testing.
(9 VAC 5-80-110, 9 VAC 5-50-50 and Condition 158 of 09/27/10 PSD Permit)

3. Covanta Alexandria/Arlington, Inc. shall document in its annual report that actual carbon monoxide (CO) emissions have not increased more than ninety-nine tons per year from an average of 1998 & 1999 facility wide actual CO emissions of 46.5 tons/yr, calculated on a cumulative basis.
(9 VAC 5-80-110, 9 VAC 5-50-50 and Condition 159 of 09/27/10 PSD Permit)

4. Covanta Alexandria/Arlington, Inc. shall submit a semiannual report including the information specified in permit Conditions III.E.5 through III.E.8, as applicable, according to the schedule specified in Condition III.E.15.
(9 VAC 5-80-110, 9 VAC 5-40-8160D, and Condition 152 of 09/27/10 PSD Permit)

5. A summary of data collected for all pollutants and parameters regulated under this article, which includes the information specified in sections a. through e. of this permit condition.

   a. A list of the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, sulfuric acid mist, and fugitive ash emission levels achieved during the performance tests recorded under permit Condition III.C.9.

   b. A list of the highest emission level recorded for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, and particulate matter control device inlet temperature based on the data recorded under permit Condition III.C.3.b.

   c. List the highest opacity level measured, based on the data recorded under permit Condition III.C.3.a.(i).

d. The total number of days that the minimum number of hours of data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, and particulate matter control device temperature data were not obtained based on the data recorded under permit Condition III.C.6.

e. The total number of hours that data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, and particulate matter control device temperature were excluded from the calculation of average emission concentrations or parameters based on the data recorded under permit Condition III.C.7.

(9 VAC 5-80-110, 9 VAC 5-40-8160D.1, and Condition 153 of 09/27/10 PSD Permit)

6. The summary of data reported under permit Condition III.E.5 shall also provide the types of data specified in permit Condition III.E.5 for the calendar year proceeding the year being reported, in order to provide the Board with a summary of the performance of Covanta Alexandria/Arlington, Inc. over a two year period.
(9 VAC 5-80-110, 9 VAC 5-40-8160D.2, and Condition 154 of 09/27/10 PSD Permit)

7. The summary of data including the information specified in permit Conditions III.E.5 and III.E.6 shall highlight any emission or parameter levels that did not achieve the emission or parameter limits specified under this subpart.
(9 VAC 5-80-110, 9 VAC 5-40-8160D.3, and Condition 155 of 09/27/10 PSD Permit)

8. A notification of intent to begin the reduced dioxin/furan performance testing schedule specified in 9 VAC 5-40-8140F.5.b during the following calendar year.
(9 VAC 5-80-110, 9 VAC 5-40-8160D.4, and Condition 156 of 09/27/10 PSD Permit)

9. Covanta Alexandria/Arlington, Inc. shall submit a semiannual report that includes the information specified in permit Conditions III.E.10 through III.E.14 for any recorded pollutant or parameter that does not comply with the pollutant or parameter limit specified under this article, according to the schedule specified under permit Condition III.E.15.
(9 VAC 5-80-110, 9 VAC 5-40-8160E, and Condition 160 of 09/27/10 PSD Permit)

10. The semiannual report shall include information recorded under permit Condition III.C.4 for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, and opacity.
(9 VAC 5-80-110, 9 VAC 5-40-8160E.1, and Condition 161 of 09/27/10 PSD Permit)

11. For each date recorded as required by permit Condition III.C.4 and reported as required by permit Condition III.E.10, the semiannual report shall include the sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, or opacity data, as applicable, recorded under permit Conditions III.C.3.a.(i) and III.C.3.b, as applicable.
(9 VAC 5-80-110, 9 VAC 5-40-8160E.2, and Condition 162 of 09/27/10 PSD Permit)

12. If the test reports recorded under permit Condition III.C.9 document any particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and

fugitive ash emission levels that were above the applicable pollutant limits, the semiannual report shall include a copy of the test report documenting the emission levels and the corrective actions taken.
(9 VAC 5-80-110, 9 VAC 5-40-8160E.3, and Condition 163 of 09/27/10 PSD Permit)

13. The semiannual report shall include the information recorded under permit Condition III.C.13 for the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate.
(9 VAC 5-80-110, 9 VAC 5-40-8160E.4, and Condition 164 of 09/27/10 PSD Permit)

14. For each operating date reported as required by permit Condition III.E.13 the semiannual report shall include the carbon feed rate data recorded under permit Condition III.C.5.b.
(9 VAC 5-80-110, 9 VAC 5-40-8160E.5, and Condition 165 of 09/27/10 PSD Permit)

15. Semiannual reports required by permit Conditions III.E.4 through III.E.14 shall be submitted according to the schedule specified in sections a. and b. of this permit condition.

    a. If the data reported in accordance with permit Conditions III.E.4 through III.E.14 were collected during the first calendar half, then the report shall be submitted by August 1 following the first calendar half.

    b. If the data reported in accordance with permit Conditions III.E.4 through III.E.14 were collected during the second calendar half, then the report shall be submitted by February 1 following the second calendar half.

    (9 VAC 5-80-110, 9 VAC 5-40-8160E.6, and Condition 166 of 09/27/10 PSD Permit)

16. All reports specified under permit Conditions III.E.4 through III.E.14 shall be submitted as one paper copy, and one copy on electronic media postmarked on or before the submittal dates specified under these permit conditions, and maintained onsite as a paper copy for a period of five years.
(9 VAC 5-80-110, 9 VAC 5-40-8160G, and Condition 167 of 09/27/10 PSD Permit)

17. If Covanta Alexandria/Arlington, Inc. would prefer to select a different annual or semiannual date for submitting the periodic reports required by permit Conditions III.E.4 through III.E.15, then the dates may be changed by mutual agreement between the owner and the Board.
(9 VAC 5-80-110, 9 VAC 5-40-8160I, and Condition 169 of 09/27/10 PSD Permit)

18. The permittee shall provide written notification to the Regional Air Compliance Manager of the DEQ's NRO of the date of any emissions test that will be used to determine compliance with a standard. Notification shall be postmarked not less than thirty days prior to such date.
(9 VAC 5-80-110, 40 CFR 60.7, 40 CFR 60.8 and 9 VAC 5-40-50.A.2)

IV. Requirements for Storage Silos– (Emission Units 004-01, 005-01, and 007-01)

A. Limitations

1. Particulate emissions from the carbon silo shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 9 VAC 5-50-90, 9 VAC 5-80-1180, 9 VAC 5-50-260, Condition 3 of 03/16/10 minor NSR Permit, and Condition 4A of 09/27/10 PSD Permit)

2. Particulate emissions from the lime silo shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 9 VAC 5-50-90, 9 VAC 5-80-1180, Condition 3 of 03/16/10 minor NSR Permit and Condition 4A of PSD 09/27/10 Permit)

3. Particulate emissions from the Dolomitic lime silo shall be controlled by a fabric filter. The fabric filter shall be provided with adequate access for inspection.
(9 VAC 5-80-110, 9 VAC 5-50-90, 9 VAC 5-80-1180, and Condition 3 of 03/16/10 minor NSR Permit)

4. Visible emissions from the carbon and lime silos shall not exceed twenty percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent opacity.
(9 VAC 5-50-80, 9 VAC 5-80-110 and Condition 12A of 09/27/10 PSD Permit)

5. Particulate matter emissions from the carbon silo shall not exceed 22.22 lbs/hr.
(9 VAC 5-80-110, 9 VAC 5-40-270 and Condition 10A of 09/27/10 PSD Permit)

6. Particulate matter emissions from the lime silos shall not exceed 22.22 lbs/hr.
(9 VAC 5-80-110, 9 VAC 5-40-270 and Condition 10A of 09/27/10 PSD Permit)

B. Testing

1. The permitted facility shall be constructed so as to allow for emissions testing at any time using appropriate methods. Upon request from the DEQ, test ports shall be provided at the appropriate locations.
(9 VAC 5-50-30 and 9 VAC 5-80-110)

2. If testing is conducted in addition to the monitoring specified in this permit, the permittee shall use the following test methods in accordance with procedures approved by the DEQ as follows:

Pollutant	Test Method (40 CFR Part 60, Appendix A)
PM/PM-10	EPA Method 5, 17
Visible Emission	EPA Method 9

(9 VAC 5-80-110)

V. Requirements for Storage Tank– (Emission unit 006-01)

A. Recordkeeping

1. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The content and format of such records shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO. These records shall be available on-site for inspection by the DEQ for the life of the source.
(9 VAC 5-80-110, 40 CFR 60.110b(c) 40 CFR 60.116b(a)-(b), and Condition 151C of 02/04/02 PSD Permit)

VI. Facility Wide Conditions

A. Reporting

1. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Regional Air Compliance Manager of the DEQ's NRO of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least twenty-four hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

   a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;

   b. The expected length of time that the air pollution control equipment will be out of service;

   c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;

   d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

   (9 VAC 5-80-110, 9 VAC 5-20-180 B, Condition 21 of 03/16/10 minor NSR Permit, and Condition 180 of 09/27/10 PSD Permit)

VII. Insignificant Emission Units

The following emission units at the facility are identified in the application as insignificant emission units under 9 VAC 5-80-720:

Emission Unit No.	Emission Unit Description	Citation	Pollutants Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
IU-1	MSW Building/Pit	9 VAC 5-80-720B	PM, PM_{10} and VOC	N/A
IU-2	Ash Building	9 VAC 5-80-720B	PM, PM_{10}, SO_2, HCl, Cd, Pb and Hg	N/A
IU-3	Water Heater	9 VAC 5-80-720C.2	N/A	199,999 Btu/hr
IU-4	Emergency Diesel Generator	9 VAC 5-80-720C.4	N/A	230 KW
IU-5	Lime Slacker Area	9 VAC 5-80-720B	PM, PM_{10}, VOC	N/A
IU-6	Cooling Tower	9 VAC 5-80-720A.71	N/A	N/A
IU-7	Aqueous Ammonia Storage Tank	9 VAC 5-80-720A.42	N/A	N/A
IU-8	Diesel AST	9 VAC 5-80-720B	VOC	N/A

These emission units are presumed to be in compliance with all requirements of the federal Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping, or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

VIII. Permit Shield & Inapplicable Requirements

1. Compliance with the provisions of this permit shall be deemed compliance with all applicable requirements in effect as of the permit issuance date as identified in this permit. This permit shield covers only those applicable requirements covered by terms and conditions in this permit and the following requirements which have been specifically identified as being not applicable to this permitted facility:

Citation	Title of Citation	Description of Applicability
No inapplicable requirements were identified in the permit application.		

2. Nothing in this permit shield shall alter the provisions of §303 of the federal Clean Air Act, including the authority of the administrator under that section, the liability of the owner for any violation of applicable requirements prior to or at the time of permit issuance, or the ability to obtain information by the administrator pursuant to §114 of the federal Clean Air Act, (ii) the Board pursuant to §10.1-1314 or §10.1-1315 of the Virginia Air Pollution Control Law or (iii) the Department pursuant to §10.1-1307.3 of the Virginia Air Pollution Control Law.
(9 VAC 5-80-140)

IX. General Conditions

A. Federal Enforceability

All terms and conditions in this permit are enforceable by the administrator and citizens under the federal Clean Air Act, except those that have been designated as only state-enforceable.
(9 VAC 5-80-110 N)

B. Permit Expiration

This permit has a fixed term of five years. The expiration date shall be the date five years from the date of issuance. Unless a timely and complete renewal application consistent, with 9 VAC 5-80-80, has been submitted, to the Department, by the owner, the right of the facility to operate shall be terminated upon permit expiration.

1. The owner shall submit an application for renewal at least six months but no earlier than eighteen months prior to the date of permit expiration.

2. If an applicant submits a timely and complete application for an initial permit or renewal under this section, the failure of the source to have a permit or the operation of the source without a permit shall not be a violation of Article 1, Part II of 9 VAC 5 Chapter 80, until the Board takes final action on the application under 9 VAC 5-80-150.

3. No source shall operate after the time that it is required to submit a timely and complete application under subsections C and D of 9 VAC 5-80-80 for a renewal permit, except in compliance with a permit issued under Article 1, Part II of 9 VAC 5 Chapter 80.

4. If an applicant submits a timely and complete application under section 9 VAC 5-80-80 for a permit renewal but the Board fails to issue or deny the renewal permit before the end of the term of the previous permit, (i) the previous permit shall not expire until the renewal permit has been issued or denied and (ii) all the terms and conditions of the previous permit, including any permit shield granted pursuant to 9 VAC 5-80-140, shall remain in effect from the date the application is determined to be complete until the renewal permit is issued or denied.

5. The protection under subsections F 1 and F 5 (ii) of section 9 VAC 5-80-80 F shall cease to apply if, subsequent to the completeness determination made pursuant section 9 VAC 5-80-80 D, the applicant fails to submit by the deadline specified in writing by the Board any additional information identified as being needed to process the application.

(9 VAC 5-80-80 B, C and F, 9 VAC 5-80-110 D and 9 VAC 5-80-170 B)

C. Recordkeeping and Reporting

1. All records of monitoring information maintained to demonstrate compliance with the terms and conditions of this permit shall contain, where applicable, the following:

   a. The date, place as defined in the permit, and time of sampling or measurements.

   b. The date(s) analyses were performed.

   c. The company or entity that performed the analyses.

   d. The analytical techniques or methods used.

   e. The results of such analyses.

   f. The operating conditions existing at the time of sampling or measurement.

   (9 VAC 5-80-110 F)

2. Records of all monitoring data and support information shall be retained for at least five years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
   (9 VAC 5-80-110 F)

3. The permittee shall submit the results of monitoring contained in any applicable requirement to DEQ no later than **March 1** and **September 1** of each calendar year. This report must be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

   a. The time period included in the report. The time periods to be addressed are January 1 to June 30 and July 1 to December 31.

   b. All deviations from permit requirements. For purposes of this permit, deviations include, but are not limited to:

      i. Exceedance of emissions limitations or operational restrictions;

      ii. Excursions from control device operating parameter requirements, as documented by continuous emission monitoring, periodic monitoring, or compliance assurance monitoring which indicates an exceedance of emission limitations or operational restrictions; or,

      iii. Failure to meet monitoring, recordkeeping, or reporting requirements contained in this permit.

c. If there were no deviations from permit conditions during the time period, the permittee shall include a statement in the report that "no deviations from permit requirements occurred during this semi-annual reporting period."

(9 VAC 5-80-110 F)

D. Annual Compliance Certification

Exclusive of any reporting required to assure compliance with the terms and conditions of this permit or as part of a schedule of compliance contained in this permit, the permittee shall submit to EPA and DEQ no later than **March 1** each calendar year a certification of compliance with all terms and conditions of this permit including emission limitation standards or work practices. The compliance certification shall comply with such additional requirements that may be specified pursuant to §114(a)(3) and §504(b) of the federal Clean Air Act. This certification shall be signed by a responsible official, consistent with 9 VAC 5-80-80 G, and shall include:

1. The time period included in the certification. The time period to be addressed is January 1 to December 31.

2. The identification of each term or condition of the permit that is the basis of the certification.

3. The compliance status.

4. Whether compliance was continuous or intermittent, and if not continuous, documentation of each incident of non-compliance.

5. Consistent with subsection 9 VAC 5-80-110 E, the method or methods used for determining the compliance status of the source at the time of certification and over the reporting period.

6. Such other facts as the permit may require to determine the compliance status of the source.

7. One copy of the annual compliance certification shall be submitted to EPA in electronic format only. The certification document should be sent to the following electronic mailing address: R3_APD_Permits@epa.gov

(9 VAC 5-80-110 K.5)

E. Permit Deviation Reporting

The permittee shall notify the Regional Air Compliance Manager of the DEQ's NRO, within four daytime business hours, after discovery of any deviations from permit requirements which may cause excess emissions for more than one hour, including those attributable to upset conditions as may be defined in this permit. In addition, within

fourteen days of the discovery, the permittee shall provide a written statement explaining the problem, any corrective actions or preventative measures taken, and the estimated duration of the permit deviation. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. The occurrence should also be reported in the next semi-annual compliance monitoring report pursuant to General Condition IX.C.3 of this permit. (9 VAC 5-80-110 F.2 and 9 VAC 5-80-250)

F. Failure/Malfunction Reporting

In the event that any affected facility or related air pollution control equipment fails or malfunctions in such a manner that may cause excess emissions for more than one hour, the owner shall, as soon as practicable but no later than four daytime business hours, notify the Regional Air Compliance Manager of the DEQ's NRO by facsimile transmission, telephone, electronic mail, or telegraph of such failure or malfunction and shall within fourteen days provide a written statement giving all pertinent facts, including the estimated duration of the breakdown. Excess emissions for NO_x, SO_2 and CO for more than one hour shall be based on the averaging periods specified in Conditions III.A.11 and the emission limits specified in Condition III.A.12. Owners subject to the requirements of 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not required to provide the written statement prescribed in this paragraph for facilities subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the owner shall notify the Regional Compliance Manager of the DEQ's NRO.

1. The emission units that have continuous monitors subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C are not subject to the fourteen day notification.

2. The emission units subject to the reporting and the procedure requirements of 9 VAC 5-40-50 C and the procedures of 9 VAC 5-50-50 C are listed below:

   a. Municipal Waste Combustor – Emission Units 001-01 and 001-02;

   b. Municipal Waste Combustor – Emission Units 002-01 and 002-02; and

   c. Municipal Waste Combustor – Emission Units 003-01 and 003-02.

3. Each owner required to install a continuous monitoring system subject to 9 VAC 5-40-41 or 9 VAC 5-50-410 shall submit a written report of excess emissions (as defined in the applicable emission standard) to the Board for every calendar quarter. All quarterly reports shall be postmarked by the thirtieth day following the end of each calendar quarter and shall include the following information:

   a. The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h) or 9 VAC 5-40-41 B 6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

   b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any

malfunction (if known), the corrective action taken or preventative measures adopted;

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

d. When no excess emissions have occurred or the continuous monitoring systems have not been inoperative, repaired or adjusted, such information shall be stated in the report.

4. All emission units not subject to 9 VAC 5-40-50 C and 9 VAC 5-50-50 C must make written reports within fourteen days of the malfunction occurrence.

(9 VAC 5-20-180 C, 9 VAC 5-40-50, and 9 VAC 5-50-50)

G. Severability

The terms of this permit are severable. If any condition, requirement or portion of the permit is held invalid or inapplicable under any circumstance, such invalidity or inapplicability shall not affect or impair the remaining conditions, requirements, or portions of the permit.
(9 VAC 5-80-110 G.1)

H. Duty to Comply

The permittee shall comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the federal Clean Air Act or the Virginia Air Pollution Control Law or both and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or, for denial of a permit renewal application.
(9 VAC 5-80-110 G.2)

I. Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
(9 VAC 5-80-110 G.3)

J. Permit Modification

A physical change in, or change in the method of operation of, this stationary source may be subject to permitting under State Regulations 9 VAC 5-80-50, 9 VAC 5-80-1100, 9 VAC 5-80-1605, or 9 VAC 5-80-2000 and may require a permit modification and/or revisions except as may be authorized in any approved alternative operating scenarios.
(9 VAC 5-80-190 and 9 VAC 5-80-260)

K. Permit Action for Cause

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause as specified in 9 VAC 5-80-110 L, 9 VAC 5-80-240 and 9 VAC 5-80-260. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
(9 VAC 5-80-110 G.4)

2. Such changes that may require a permit modification and/or revisions include, but are not limited to, the following:

   a. Erection, fabrication, installation, addition, or modification of an emissions unit (which is the source, or part of it, which emits or has the potential to emit any regulated air pollutant), or of a source, where there is, or there is potential of, a resulting emissions increase;

   b. Reconstruction or replacement of any emissions unit or components thereof such that its capital cost exceeds fifty percent of the cost of a whole new unit;

   c. Any change at a source which causes emission of a pollutant not previously emitted, an increase in emissions, production, throughput, hours of operation, or fuel use greater than those allowed by the permit, or by 9 VAC 5-80-11, unless such an increase is authorized by an emissions cap; or any change at a source which causes an increase in emissions resulting from a reduction in control efficiency, unless such an increase is authorized by an emissions cap;

   d. Any reduction of the height of a stack or of a point of emissions, or the addition of any obstruction which hinders the vertical motion of exhaust;

   e. Any change at the source which affects its compliance with conditions in this permit, including conditions relating to monitoring, recordkeeping, and reporting;

   f. Addition of an emissions unit which qualifies as insignificant by emissions rate (9 VAC 5-80-720 B) or by size or production rate (9 VAC 5-80-720 C);

   g. Any change in insignificant activities, as defined by 9 VAC 5-80-90 D.1.a(1) and 9 VAC 5-80-720 B and 9 VAC 5-80-720 C.

(9 VAC 5-80-110 G, 9 VAC 5-80-110 J, 9 VAC 5-80-240, and 9 VAC 5-80-260)

L. Property Rights

The permit does not convey any property rights of any sort, or any exclusive privilege.
(9 VAC 5-80-110 G.5)

M. Duty to Submit Information

1. The permittee shall furnish to the Board, within a reasonable time, any information that the Board may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Board copies of records required to be kept by the permit and, for information claimed to be confidential, the permittee shall furnish such records to the Board along with a claim of confidentiality.
(9 VAC 5-80-110 G.6)

2. Any document (including reports) required in a permit condition to be submitted to the Board shall contain a certification by a responsible official that meets the requirements of 9 VAC 5-80-80 G.
(9 VAC 5-80-110 K.1)

N. Duty to Pay Permit Fees

The owner of any source for which a permit under 9 VAC 5-80-50 through 9 VAC 5-80-305 was issued shall pay permit fees consistent with the requirements of 9 VAC 5-80-310 through 9 VAC 5-80-350. The actual emissions covered by the permit program fees for the preceding year shall be calculated by the owner and submitted to the Department by April 15 of each year. The calculations and final amount of emissions are subject to verification and final determination by the Department.
(9 VAC 5-80-110 H and 9 VAC 5-80-340 C)

O. Fugitive Dust Emission Standards

During the operation of a stationary source or any other building, structure, facility, or installation, no owner or other person shall cause or permit any materials or property to be handled, transported, stored, used, constructed, altered, repaired, or demolished without taking reasonable precautions to prevent particulate matter from becoming airborne. Such reasonable precautions may include, but are not limited to, the following:

1. Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of land;

2. Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which may create airborne dust; the paving of roadways and the maintaining of them in a clean condition;

3. Installation and use of hoods, fans, and fabric filters to enclose and vent the handling of dusty material. Adequate containment methods shall be employed during sandblasting or other similar operations;

4. Open equipment for conveying or transporting material likely to create objectionable air pollution when airborne shall be covered or treated in an equally effective manner at all times when in motion; and,

5. The prompt removal of spilled or tracked dirt or other materials from paved streets and of dried sediments resulting from soil erosion.

(9 VAC 5-40-90 and 9 VAC 5-50-90)

P. Startup, Shutdown, and Malfunction

At all times, including periods of startup, shutdown, soot blowing, and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Board, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.
(9 VAC 5-50-20 E)

Q. Alternative Operating Scenarios

Contemporaneously with making a change between reasonably anticipated operating scenarios identified in this permit, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions under each such operating scenario. The terms and conditions of each such alternative scenario shall meet all applicable requirements including the requirements of 9 VAC 5 Chapter 80, Article 1.
(9 VAC 5-80-110 J)

R. Inspection and Entry Requirements

The permittee shall allow DEQ personnel, upon presentation of credentials and other documents as may be required by law, to perform the following:

1. Enter upon the premises where the source is located or emissions-related activity is conducted, or where records must be kept under the terms and conditions of the permit.

2. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of the permit.

3. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit.

4. Sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements.

(9 VAC 5-80-110 K.2)

S. Reopening For Cause

1. The permit shall be reopened by the Board if additional federal requirements become applicable to a major source with a remaining permit term of three years or more. Such reopening shall be completed no later than eighteen months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 9 VAC 5-80-80 F.

2. The permit shall be reopened if the Board or the administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

3. The permit shall be reopened if the administrator or the Board determines that the permit must be revised or revoked to assure compliance with the applicable requirements.

4. The permit shall not be reopened by the Board if additional applicable state requirements become applicable to a major source prior to the expiration date established under 9 VAC 5-80-110 D.

(9 VAC 5-80-110 L)

T. Permit Availability

Within five days after receipt of the issued permit, the permittee shall maintain the permit on the premises for which the permit has been issued and shall make the permit immediately available to DEQ upon request.
(9 VAC 5-80-150 E)

U. Transfer of Permits

1. No person shall transfer a permit from one location to another, unless authorized under 9 VAC 5-80-130, or from one piece of equipment to another.
(9 VAC 5-80-160)

2. In the case of a transfer of ownership of a stationary source, the new owner shall comply with any current permit issued to the previous owner. The new owner shall notify the Board of the change in ownership within thirty days of the transfer and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

3. In the case of a name change of a stationary source, the owner shall comply with any current permit issued under the previous source name. The owner shall notify the Board of the change in source name within thirty days of the name change and shall comply with the requirements of 9 VAC 5-80-200.
(9 VAC 5-80-160)

V. Malfunction as an Affirmative Defense

1. A malfunction constitutes an affirmative defense to an action brought for noncompliance with technology-based emission limitations if the requirements of paragraph 2 of this condition are met.

2. The affirmative defense of malfunction shall be demonstrated by the permittee through properly signed, contemporaneous operating logs, or other relevant evidence that show the following:

   a. A malfunction occurred and the permittee can identify the cause or causes of the malfunction.

   b. The permitted facility was at the time being properly operated.

   c. During the period of the malfunction the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit.

   d. The permittee notified the Board of the malfunction within two working days following the time when the emission limitations were exceeded due to the malfunction. This notification shall include a description of the malfunction, any steps taken to mitigate emissions, and corrective actions taken. The notification

may be delivered either orally or in writing. The notification may be delivered by electronic mail, facsimile transmission, telephone, or any other method that allows the permittee to comply with the deadline. This notification fulfills the requirements of 9 VAC 5-80-110 F 2 b to report promptly deviations from permit requirements. This notification does not release the permittee from the malfunction reporting requirement under 9 VAC 5-20-180 C.

3. In any enforcement proceeding, the permittee seeking to establish the occurrence of a malfunction shall have the burden of proof. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any requirement applicable to the source.

4. The provisions of this section are in addition to any malfunction, emergency or upset provision contained in any applicable requirement.

(9 VAC 5-80-250)

W. Permit Revocation or Termination for Cause

A permit may be revoked or terminated prior to its expiration date if the owner knowingly makes material misstatements in the permit application or any amendments thereto or if the permittee violates, fails, neglects or refuses to comply with the terms or conditions of the permit, any applicable requirements, or the applicable provisions of 9 VAC 5 Chapter 80 Article 1. The Board may suspend, under such conditions and for such period of time as the Board may prescribe, any permit for any of the grounds for revocation or termination or for any other violations of these regulations.
(9 VAC 5-80-260)

X. Duty to Supplement or Correct Application

Any applicant who fails to submit any relevant facts or who has submitted incorrect information in a permit application shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrections. An applicant shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete application was filed but prior to release of a draft permit.
(9 VAC 5-80-80 E)

Y. Stratospheric Ozone Protection

If the permittee handles or emits one or more Class I or II substances subject to a standard promulgated under or established by Title VI (Stratospheric Ozone Protection) of the federal Clean Air Act, the permittee shall comply with all applicable sections of 40 CFR Part 82, Subparts A to F.
(40 CFR Part 82, Subparts A-F)

Z. Accidental Release Prevention

If the permittee has more, or will have more than a threshold quantity of a regulated substance in a process, as determined by 40 CFR 68.115, the permittee shall comply with the requirements of 40 CFR Part 68.
(40 CFR Part 68)

AA. Changes to Permits for Emissions Trading

No permit revision shall be required under any federally approved economic incentives, marketable permits, emissions trading and other similar programs or processes for changes that are provided for in this permit.
(9 VAC 5-80-110 I)

BB. Emissions Trading

Where the trading of emissions increases and decreases within the permitted facility is to occur within the context of this permit and to the extent that the regulations provide for trading such increases and decreases without a case-by-case approval of each emissions trade:

a. All terms and conditions required under 9 VAC 5-80-110, except subsection N, shall be included to determine compliance.

b. The permit shield described in 9 VAC 5-80-140 shall extend to all terms and conditions that allow such increases and decreases in emissions.

c. The owner shall meet all applicable requirements including the requirements of 9 VAC 5-80-50 through 9 VAC 5-80-300.

(9 VAC 5-80-110 I)

CC. Certification of Documents

A. The following documents submitted to the Board shall be signed by a responsible official: (i) any emission statement, application, form, report, or compliance certification; (ii) any document required to be signed by any provision of the regulations of the Board; or (iii) any other document containing emissions data or compliance information the owner wishes the Board to consider in the administration of its air quality programs. A responsible official is defined as follows:

1. For a business entity, such as a corporation, association or cooperative, a responsible official is either:

a. The president, secretary, treasurer, or a vice president of the business entity in charge of a principal business function, or any other person

who performs similar policy or decision-making functions for the business entity; or

b. A duly authorized representative of such business entity if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars) or (ii) the authority to sign documents has been assigned or delegated to such representative in accordance with procedures of the business entity.

2. For a partnership or sole proprietorship, a responsible official is a general partner or the proprietor, respectively.

3. For a municipality, state, federal, or other public agency, a responsible official is either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of the principal geographic unit of the agency.

B. Any person signing a document under subsection A above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

C. Subsection B shall be interpreted to mean that the signer must have some form of direction or supervision over the persons gathering the data and preparing the document (the preparers), although the signer need not personally nor directly supervise these activities. The signer need not be in the same line of authority as the preparers, or do the persons gathering the form need to be employees (e.g., outside contractors can be used). It is sufficient that the signer has authority to assure that the necessary actions are taken to prepare a complete and accurate document.

(9 VAC 5-20-230)

APPENDIX A
Material Review Process

Material Review Process

Covanta Alexandria/Arlington, Inc.
5301 Eisenhower Avenue
Alexandria/Arlington, VA 22304

Prepared by
Covanta Energy
September 22, 2010

Table of Contents

Section 1 Objectives

Section 2 Categories of Waste
- 2.1 Supplemental Waste Applications That Do Not Require Review
- 2.2 Supplemental Waste Applications That Require Review
- 2.3 Supplemental Waste that is Not Acceptable

Section 3 Supplemental Waste Management
- 3.1 Application, Review and Evaluation Process
  - 3.1.1 Application Procedures
  - 3.1.2 Waste Evaluation
  - 3.1.3 Approval or Rejection
  - 3.1.4 Waste Delivery
  - 3.1.5 Waste Processing
- 3.2 Criteria for Acceptance
- 3.3 Reporting
- 3.4 Responsibility for Laboratory Results
- 3.5 Responsibility for Accuracy
- 3.6 Amendment of Supplemental Waste Procedure

Section 4 Environmental Review Criteria

- 4.1 Purpose
- 4.2 Chemical Data
- 4.3 RCRA Characterization
- 4.4 Air Emissions
  - 4.4.1 Potential Emissions Review
  - 4.4.2 Acid Gases
  - 4.4.3 Lead, Cadmium and Mercury
  - 4.4.4 Hazardous Air Pollutants (HAPs)
- 4.5 Operations review

Section 5 Scheduling and Receiving Waste Materials

Section 6 Monitoring, Reporting and Record Keeping

Appendix I Definitions/Regulations

Appendix II Permits

Appendix III Forms

Section 1 - Objectives

The objective of this Material Review Process (MRP) is to ensure that the Covanta Alexandria/Arlington, Inc. (CAA) facility manages and processes Supplemental Waste in an environmentally sound manner in accordance with applicable environmental permits (ref appendix I) and regulations (ref appendix II). Supplemental wastes include other wastes which are not defined as MSW but have similar characteristics to MSW, and Special Wastes requiring special precautions as defined in 9VAC20-80-10 (reference Appendix I). Although MSW is defined in the Municipal Waste Combustor (MWC) regulations which govern the operation and establish the emission standards for facilities such as the CAA (9 VAC 5 Chapter 40, Part II, Article 54, currently codified at 9 VAC 5-40-7960), this definition of MSW is intended only to specify the types of wastes which trigger a combustion facility to be covered under the MWC rules. The language found in the Article 54 definition of MSW was used by VADEQ to develop the definition of Approved Fuel in Condition IIIA2 of the Title V permit for the CAA facility (see definitions, Appendix I in this MRP).

This MRP describes the process used to identify, evaluate, document, and properly handle all Supplemental Wastes received and processed by CAA. Detailed CAA procedures and coordination procedures between Covanta Secure Services (CSS), the corporate group responsible for reviewing Supplemental Waste and CAA are included in the 'Standard Operating Procedure - Supplemental Waste Program' for Covanta, Inc. These detailed procedures are provided to VADEQ as part of the documentation of the Solid Waste Facility Permit and are summarized in this MRP.

The MRP starts with a Material Characterization Form (MCF---copy provided in Appendix III of this MRP) prepared by a generator of Supplemental Waste. The generator is required to provide information on the waste (e.g. MSDS', analysis, generator knowledge, etc.) so that a total review and assessment can be made as to its suitability for thermal destruction at CAA. This review, which includes environmental, health, safety and process considerations, is conducted by CSS. Once the Supplemental Waste is approved by CSS, the entire package is sent to CAA for final review. The CAA Facility Manager has final authority to accept and process Supplemental Waste. Once the facility review is completed, the facility notifies CSS of its decision. Following CSS & CAA approvals, a letter of approval is sent to the generator for Supplemental Wastes which are approved. These wastes can then be received/processed at CAA. If the Supplemental Waste is rejected, a letter of rejection is sent to the generator. The MRP analysis/report will be sent to VADEQ for their record. All records and documentation will be kept on file at CAA for a minimum of 5 years.

Section 2 - Categories of Supplemental Waste Applications

Supplemental Waste Application categories established by the MRP include:

- Supplemental Waste that does not require review
- Supplemental Waste that does require review
- Supplemental Waste that is not acceptable

2.1 Supplemental Waste Applications That Do Not Require Review:

Supplemental Wastes that do not require review are those discarded materials excluded from the definition of MSW, which by nature of their similarity to items discarded in the MSW stream and chemical composition, have no impact on air emissions. These materials are limited to:

- Wood pallets (note: pallets cannot contain any "treated" wood)
- Combustible portion of "clean" construction, renovation and demolition waste such as wood and carpet (must not be covered in wire or roofing shingles)

In addition, Supplemental Wastes that do not require review also include discarded materials excluded from the definition of MSW due to origination as industrial process or manufacturing waste but are similar to the components of MSW. These materials are limited to:

- Packaging debris including
    i. Paper, cardboard and cellulose products
    ii. Plastic products
    iii. Wood
- Food
- Clothing

This type of Supplemental Waste is not profiled, but instead receives a generic approval using the alternate MCF (Form 1G---see appendix III), and is processed when received.

2.2 Supplemental Waste Applications That Require Review:

Supplemental Wastes that requires review are profiled to determine acceptability. Generally, these categories of Supplemental Wastes are those discarded materials excluded from the definition of MSW because they are industrial process or manufacturing waste. Industrial process or manufacturing waste shall mean any solid waste that is the direct result of the production process, including finished product that has not been warehoused or distributed to commercial, retail or institutional facilities. Any source generating Supplemental Wastes will be considered for review, with the acceptability determined by the nature of the wastes themselves. Quantity limits will be determined on a case-by-case basis as necessary by CSS and will be consistent with limits imposed by the CAA operating requirements.

The following are categories of Supplemental Waste that are acceptable at CAA provided that they meet the review criteria established by this MRP.

- Oily waste, consisting of absorbents and debris with oil contamination. All recoverable oil removed.
- Soil contaminated with petroleum product as defined by 9 VAC 20-80-700 (Appendix I).
- Commercial Chemical Product as defined by 9 VAC 20-80-10.
- Industrial Waste as defined by 9 VAC 20-80-10 (Appendix I).
- Liquid Waste as defined by 9 VAC 20-80-10 (Appendix I).
- "RCRA empty" containers that are not subject to 40 CFR 261 through 265, etc. as defined in 40 CFR 261.7 (Appendix I).
- "Triple rinsed" pesticide containers.
- Sewage Sludge

2.3 Supplemental Waste That Is Not Acceptable

Supplemental Waste identified below is not acceptable for processing at CAA as applied to homogenous loads of the following materials:

- FIFRA regulated pesticides.
- RCRA hazardous waste.
- Hazardous waste as defined by 40 CFR 261 (Appendix I).
- Materials exempt from RCRA hazardous waste regulations due to the small quantity generator rules, 40 CFR 261.5 (Appendix I).
- Solid waste containing concentrations of PCBs greater than 1.0 ppmw, 9 VAC 20-80-650 (Appendix I).
- Regulated medical waste as defined by 9 VAC 20-120-10 (Appendix I).
- Batteries.
- Bulky waste, large machinery and appliances.
- Non combustible portion of construction and demolition materials.
- Explosives.
- Universal Waste.
- Radioactive materials.
- Street sweepings from public roads outside facility property.
- Transformers and ballasts.
- Any mercury containing waste.
- Any waste otherwise prohibited by state or federal regulation.
- Animal carcasses

Section 3 -Supplemental Waste Management

All Waste Material Generators are responsible for the proper identification and classification of their Supplemental Waste. Any Waste Material Generator that requests to have its Supplemental Waste processed at CAA must have an approval letter documenting CSS and CAA review and evaluation of the waste material. This section describes the review and evaluation procedures and the responsibilities of the Supplemental Waste generator.

3.1 Application, Review and Evaluation Process

3.1.1 Application Procedures

Generators of Supplemental Wastes pursuant to this document may apply for disposal at CAA by contacting CSS. Applicants will be sent a MCF to be completed for each waste stream; these forms have been included in Appendix III. The Waste Material Generator will complete, sign and return the forms to fully characterize the waste stream. The type of chemical information that may be requested is discussed in Section 4.2.

3.1.2 Waste Evaluation

CSS Environmental, Health and Safety Specialists will evaluate each Supplemental Waste application using the approval criteria outlined in Section 4 of this document. During the evaluation process, available information will be reviewed and additional information may be requested as necessary.

3.1.3 Approval or Rejection

Once CSS & CAA review the application, approval or rejection letters will be issued by CSS to the generator for each application received. A copy of the documentation will be filed with each application to ensure consistency with the manifest documentation system. If a waste is approved, the generator will be sent an approval letter. The approval package will contain a "Terms and Conditions" document which will list the conditions under which the material is acceptable.

3.1.4 Waste Delivery

After approval, delivery of approved Supplemental Waste materials to the CAA facility must be scheduled in advance. The generator shall contact CAA to arrange a delivery time. The CAAI operating staff will include the Chief Engineer who will also act as the designated Supplemental Waste Coordinator (SWC) to ensure that the materials will be processed in accordance with all approval conditions. Upon arrival of a Supplemental Waste delivery at the CAA facility the scale house attendant will notify the SWC who will confirm that they are delivering approved Supplemental Waste materials. The

original copy of the truck manifest form and non hazardous certification must accompany the load to the CAA facility and be presented at the scale-house upon arrival.

3.1.5 Waste Processing

At the beginning of each shift during which Supplemental Wastes will be received, the SWC will review with all appropriate personnel the materials to be received, any special handling requirements and any unique characteristics. During this meeting, a thorough discussion of feed requirements will be conducted, with the SWC explaining in detail the mixture requirements. The SWC will observe the initial feeding of wastes and communicate to the operator if any adjustments should be made. Once the Supplemental Waste processing proceeds, should any issues arise; the operator will immediately contact the SWC.

Upon delivery to the scale house at CAA, the scale house attendant will notify the Control Room of the arrival and will direct the vehicle to the appropriate location where it will be met by the SWC or his designee. CAA staff will then compare the truck manifest to the approval and visually inspect the contents of the shipment to ensure that it matches the physical description in the approval. In addition all containers will be checked for proper labeling and the quantity of material in the load will be checked against the manifest. All inconsistencies must be resolved before processing. Any unidentified materials will be rejected and returned to the generator.

Accepted Supplemental Waste will then be processed and fed into the boilers by one of two methods. The first method involves placing the Supplemental Waste directly into the refuse holding pit and mixing the Supplemental Waste with MSW. Supplemental Waste that can be blended with MSW at a mix rate of 30 parts MSW to one part Supplemental Waste or less e.g. (20 or 10 parts MSW to one part Supplemental Waste) will be placed into the refuse holding pit. These materials are pushed directly into the refuse holding pit with the front end loader. The crane operator then picks up the co-mingled Supplemental Waste materials with the grapple crane. The grapple crane has a nominal capacity of 6 cu. yds. and lifts mixed waste with an average density of 700 lb/cu.yd., or about 2.2 tons per lift. The material is lifted and then moved to one area of the pit. As the crane is being moved, the material is slowly released from the crane spreading the Supplemental Waste material throughout the pit. The operator then picks up a grapple load of MSW and lightly covers the Supplemental Waste material in the same manner. The crane operator then picks up parts of the Supplemental Waste/MSW mixture, lifts the material about 20 feet above the surface of the waste in the pit, then moves the crane while slowly releasing the mixture. This further mixes the materials. The process is repeated until the desired mix ratio is achieved. The crane operator will be briefed by the SWC prior to accepting and mixing Supplemental Waste. At this meeting, the operator is given a sheet with the schedule of supplemental loads for the day. The sheet lists the approval numbers, schedule times, tonnage, material type and mix ratio for each load. This allows the operator to know how much is on each load and how it is to be mixed.

The second method involves transporting the Supplemental Waste material directly to the feed hopper, then feeding the material directly into the feed hopper at a rate specified during the review process. CAA staff has a tracking document that lists each approved material and its specific feed rate. This tracking document is also provided to the generators as it identifies the packaging requirements for each material. These packaging requirements correspond with the feed rates for each material. For example, if the feed rate for a particular material is 500 lbs / 15 minutes per boiler, the tracking document tells the generator that each container of this material may weigh up to but not exceed 500 lbs. If the actual container weight is 250 lbs each, the operator may feed two (2) containers every 15 minutes.

The determination of pit and hopper approval conditions is made upon the basis of calculating a mix ratio of MSW to Supplemental Waste that may be processed in conformance with all applicable regulatory standards, employee health and safety standards and without exceeding any emission limit. If the calculated mix ratio exceeds 30:1 the material must be hopper fed and the mix ratio is converted into a feed rate as pounds per 15 minutes per hopper. Materials that have a pit mix ratio of 30:1 or less may be mixed in the pit. The approval conditions for each waste stream include processing directions. Materials that have mix ratios up to 10:1 are considered 'normal mixing', greater than 10:1 and up to 20:1 are considered 'medium' indicating that the crane operator should pay special attention to the material, and mix ratios over 20:1 are considered 'high' requiring more care in mixing. In some cases materials that are considered difficult to mix require 'extensive' mixing. In addition the approval will indicate the reason that any material that requires more than normal mixing (potential to form acid gases, physical properties, etc).

The designation of normal, medium, high and extensive mixing to CAA allows the crane operator to apply the level of mixing needed to process the material without causing process upsets. The linkage of mix ratios with these designations is based upon Covanta's Waste to Energy experience developing this program at various facilities and is consistent across all mass burn facilities. Due to the variety of pit conditions and waste properties it is not feasible to have a formula for the crane operator to follow for mixing Supplemental Waste with MSW. It is the crane operator's job to thoroughly mix MSW prior to the feeding the combustor. His experience in mixing MSW to provide uniform feed to the combustor is utilized when blending Supplemental Waste. The crane operator is in constant contact with the Control Room Operator and receives feed back regarding any combustion upset; this allows him to maintain a well mixed blend of waste to the unit to maintain good combustion which results in minimizing emissions.

3.2 CSS Criteria for Acceptance

Decisions on whether to accept a specific Supplemental Waste will be based on the acceptance criteria. These evaluations are based on employee safety, environmental protection, facility operation, shipping and handling requirements and other appropriate criteria. Meeting all criteria does not guarantee a waste will be accepted. CAA reserves the right to reject any waste. CAA also reserves the right to add additional acceptance criteria. All accepted waste must be delivered directly to the CAA facility.

3.3 Reporting

Files are maintained of each approved Supplemental Waste application at CAA for review by VADEQ for at least five (5) years after the Supplemental Waste in that approved application ceases to ship into the facility, consistent with the lifetime of CAA's Title V permit.

3.4 Responsibility for Laboratory Results

The Waste Material Generator is responsible for obtaining laboratory data requested by CSS. CSS may request that the generator supply additional information or supply information from laboratories regarding quality control information. All laboratory data must be certified, by the laboratory, as to the accuracy and methods used.

3.5 Responsibility for Accuracy

The generator is responsible for supplying CSS with all the information needed to appropriately evaluate a waste. CSS reserves the right to request additional information. CSS reserves the right to not accept the waste material.

3.6 Amendment of the MRP

CAA recognizes that the characteristics of wastes, the analytical procedures used to characterize wastes, modification of the facility's permits and emission standards, the rules governing management of wastes may change in the future. CAA will provide amendments to this MRP as necessary to accommodate these changes. MRP modifications will only be made upon receiving VADEQ approval to do so.

Section 4 Environmental Review Criteria

4.1 Purpose

The purpose of the Environmental Review is to fully understand the properties of the waste to determine if it can be accepted and processed as Supplemental Waste in compliance with all applicable permit and regulatory criteria.

4.2 Chemical data

The MCF requires that the Waste Material Generator identify the chemical composition of the waste. This data is used to evaluate the waste for environmental acceptance. An addendum to the 'standard' forms (Virginia Destination Addendum Form----see Appendix III) will be used for waste destined for Virginia to specifically identify any constituents in the waste that are Hazardous Air Pollutants (HAPs) as defined in the Commonwealth of Virginia State Air Pollution Control Board's (SAPCB's) Regulations for the Control and Abatement of Air Pollution (Regulations). CSS will use this information to determine whether additional feed considerations are necessary to meet state HAPs regulations. The chemical composition of the waste may be determined by either the Waste Material Generator's detailed process knowledge or analytical testing. Process knowledge is typically available for wastes produced by industrial manufacturing facilities. At these facilities, the generator has control over process variables and experience with raw materials, intermediate products and final products. The Waste Material Generator must submit the basis for any materials where process knowledge is used as the determining factor for acceptability. Process knowledge may include:

- Formulation sheets or chemical formulas
- Material Safety Data Sheets
- Detailed process descriptions, flow sheets, etc.
- Public documents (Chemical Engineer's Handbook, etc.)

Analytical data is required for wastes that cannot be completely described by process knowledge. Analytical data may include:

- RCRA tests as defined in 40 CFR 261 Appendix I, II ,and III
- Total metals, sulfur, or chlorine analysis
- Tests to determine 'on-spec' used oil commingled with solid waste per 40 CFR 279

4.3 RCRA Characterization

This review ensures that all materials delivered to CAA are not RCRA hazardous.

- Each generator shall provide a certificate that materials are non-hazardous and information that supports the certification.
- CSS shall determine that the generator has appropriate procedures to characterize waste as non-hazardous based on the data provided and discussions with appropriate representatives of the generator. CSS will review generator information to confirm that there are no inconsistencies with the non-hazardous characterization. This information can include, but not be limited to, MSDS', physical analysis, chemical analysis, raw material lists and process descriptions. Any inconsistencies must be resolved to confirm the non-hazardous determination.

4.4 Air Emissions

4.4.1 Potential Emissions Review

CSS shall review the Supplemental Waste application to consider all potential air emissions. CSS conservatively assumes that all materials of concern are converted into air emissions, i.e. chlorine, sulfur, cadmium, mercury and lead (except that elements that are chemically bound in a non-combustible material are not considered, for example an alloy bolt that contains cadmium in the alloy). Where a range of concentration is provided, 'worst case' concentrations of chlorine, sulfur, cadmium, mercury and lead are utilized in the review process. The ultimate goal of the review process is to ensure that the burning of any supplemental waste does not create any other regulated air pollutant, in any way deteriorate the air quality in the region or contain any air-pollution causing substance that was otherwise not considered in the current operating permits.

4.4.2 Acid gases

Acid gas emissions are calculated assuming that all (100%) sulfur and chlorine content is converted to acid gas in the raw (non-scrubbed) flue gas. These conservative assumptions establish a maximum allowable Supplemental Waste concentration of 0.9% by weight for chlorine and 1.2% by weight for sulfur that can be pit fed. These amounts of acid gas constituents conservatively increase the raw flue gas concentrations by approximately 120 ppmdv and 180 ppmdv respectively and are well within the capability of the air pollution control equipment to maintain permit limits. These criteria are selected to maintain acid gas concentrations within the desired operational target range. Supplemental Waste with higher concentrations of sulfur or chlorine is acceptable for disposal by mixing in the refuse pit or may be processed by periodically feeding measured quantities directly to the feed hopper of the MWC unit. These calculation procedures produce feed conditions for Supplemental Waste that are equivalent to the above criteria.

4.4.3 Lead, Cadmium and Mercury

Supplemental Waste applications that contain lead or cadmium will be evaluated based upon the baghouse efficiency described below, baseline emissions calculated from the 80% upper confidence limit of annual stack test data, and a maximum calculated emission (baseline plus Supplemental Waste) not to exceed 67% of the permit limit. All

lead and cadmium (except lead or cadmium contained in a non-combustible metal alloy or similar material) are assumed to be volatized.

The allowable concentration for lead is based upon maintaining emissions below the permit limit of 440 ug/dscm (micro grams per standard dry cubic meter) @ 7% O_2. The allowable concentration for cadmium is based upon maintaining emissions below the permit limit of 40 ug/dscm @ 7% O_2.

The permit emission limit for mercury is 80 ug/dscm @7% O_2. Supplemental Waste containing manufactured mercury compounds is not accepted. In some wastes the Waste generator has knowledge of 'artifact' mercury that is trace mercury in minerals or compounds that is the result of mercury found in nature. These materials are accepted provided that the mercury concentration is less than 1 ppmw. Note that 1 ppmw is the equivalent of approximately 20 micrograms per standard cubic meter in the raw flue gas. As typical mercury removal efficiency exceeds 95%, the impact on emissions is generally less than 1 microgram per standard cubic meter or less than 0.045 grams per ton of Supplemental Waste processed from 'artifact' mercury.

4.4.4. Hazardous Air Pollutants (HAPs)

Each waste stream will be reviewed using generator knowledge or analytical results and the concentration of any HAPs contained in the Supplemental Waste will be reviewed for potential ambient air impact. This review will also include an assessment of the ability of the wastes to create HAPs during combustion. For example a benzene containing waste, say a material with 100 ppmw benzene contamination, would be analyzed for benzene HAPs emissions; just as chlorophenols have the potential to generate dioxins.

- **Particulate HAPs** - Collection efficiency of particulate HAPS (inorganic materials such as metals) will be 0.99, based upon baghouse collection efficiency. Typical inlet mass balance concentrations are in excess of 1 grain/dscf corrected and outlet particulate loadings are less than 0.01 grain/dscf corrected.

  All 'Supplemental Waste' fed to the combustion units which contains HAPs will be limited to maintain emissions below the levels required by 9 VAC 5-60-200 unless applicable permit limits have been established; in that case applicable permit limits shall apply.

- **Combustible HAPs** - Covanta Alexandria/Arlington utilizes a substantially similar combustion train and air pollution control system as the Covanta Fairfax (Lorton, VA) facility. Combustion efficiency of the Covanta Fairfax facility has been modeled using procedures developed at the University of Dayton Research Institute to determine the relative stability of HAPs and correlation of calculated destructive efficiency with stack test data from similar combustion processes. This study indicated a destructive efficiency for the most difficult to destroy HAPs (benzene) of

0.9999 should be achieved. This is consistent with the facility's measured combustion efficiency which is generally 0.9996 or greater. Corrected CO_2 emissions are about 12% and corrected CO emissions are less than 50 ppmdv. This translates into a combustion efficiency of about 0.9996; at the permit limit of 100 ppmdv the combustion efficiency is about 0.9992. A combustion efficiency of 0.999 (approximately the combustion efficiency at the permit limit of 100 ppmdv CO) will be used to analyze the worst case stack emissions of any combustible HAP contained in the Supplemental Waste. No additional removal efficiency will be considered due to adsorption on particulate and capture in the baghouse.

- **Sample Calculation Procedure** - Consider a hypothetical HAP with a molecular weight of 50. 100 ppmw is equivalent to 0.2lbs of HAP/ton; with 0.999 destruction efficiency this results in an emission rate of 0.0002 lbs/ton. Consider that if the Supplemental Waste were mixed 10:1 with MSW the concentration of HAPs in the flue gas would be 0.001 ppmdv. Alternately, based upon ambient air quality modeling conducted for the permitting of the Virginia facilities, the one hour worst case chi/Q factor was 5.4 ug/m^3 per gram/sec leaving the stack. Suppose we assume 10 tons are burned in one hour (far more than we ever intend to burn in one hour), the stack emission rate is 0.0003 grams/second and worst case ground level concentration is $.0003*5.4=.002$ ug/m^3. We propose that this is a negligible amount for any listed HAP that does not have a Threshold Limit Value (TLV).

- **Additional Considerations** - For Supplemental Waste containing HAPs in concentrations exceeding 100 ppmw and which do not have an established TLV, an appropriate ambient air concentration will be established from existing databases and existing air modeling parameters applied to determine allowable stack concentrations. Supplemental Waste feed rates will be calculated from the allowable stack concentrations. The basis for determining the ambient air concentration and the acceptability of processing the waste material will be calculated as above.

  In conformance with 9 VAC 5-60-200, the potential to emit for any HAP from the CAA facility shall not exceed 22.8 lbs/hr.

4.5 Operations Review

After the successful completion of the Safety (addressed by the Standard Operating Procedure for the Supplemental Waste Program) and Environmental review (summarized in Section 4 of this MRP above) by CSS, CAA operations staff reviews the complete approval package. This review will focus upon operational considerations but will also consider the safety and environmental reviews. The CAA staff may require additional information or justification prior to accepting the Supplemental Waste. The Facility Manager has the authority to reject any proposed Supplemental Waste.

Section 5 Scheduling and Receiving Waste Materials

The safety, environmental and operations review may specify special shipping and handling conditions. Those conditions controlled by the generator will be included in the approval letter. All generators will be required to provide a pre-shipment notice and receive CAA approval prior to shipment. Any waste that cannot be handled in a manner to meet all requirements for safety, environmental compliance, and operational needs will be rejected.

Once the Waste Material Generator (or their authorized representative) receives the approval letter, they are authorized to request approval to ship the waste material. This is accomplished by calling CSS and requesting a delivery date. Once it is confirmed that the wastes are acceptable as part of the approval letter authorization that has been granted, a Covanta Secure Services Pre-shipment Notification Form (see Appendix III) is then generated and sent to the generator which details what wastes are to be delivered and when (date and time). This notice must then be sent directly to CAA so that the delivery can be entered into their schedule. Should there be a need to change the delivery schedule; CAA will notify CSS who in turn will notify the generator. New documents will be generated for the rescheduled delivery.

The scheduling of each delivery by CAA shall consider the impact of all Supplemental Waste deliveries. Deliveries of materials that have elevated levels of chlorine, sulfur, lead, cadmium, or mercury indicated in the approval conditions will be staggered to maintain compliance at all times. Materials that have the potential to emit HAPs will be scheduled to maintain potential emissions below those determined by the Environmental Review. In addition, Supplemental Waste will be scheduled consistent with the day-to-day operating conditions at the facility. For example, during maintenance and outage periods, delivery schedules will be consistent with the availability and through put of the facility.

All materials shall be shipped on a non-hazardous manifest or bill of lading. Each vehicle delivering Supplemental Waste shall include a RCRA non-hazardous certification. Supplemental Waste deliveries are carefully scheduled so they can be processed in a safe and efficient manner.

Section 6 Monitoring, Reporting and Record Keeping

For the first delivery of a new waste material to CAA, the CAA facility staff will file an Initial Waste Stream Review Report. This report will be retained in the CAA file and a copy will be forwarded to CSS for the permanent corporate file. Any processing difficulties encountered are investigated and resolved prior to accepting additional loads of the waste material.

Any difficulties experienced with ongoing deliveries of the waste materials authorized for delivery under this approval number will be reported and managed under the existing CSS Discrepancy Reporting Procedure included within the Standard Operating Procedure for the Supplemental Waste Program.

A Certificate of Destruction (see Appendix III) is generated as required which details what was destroyed and on what date. These reports are kept on file at CAA. All active Approval Packages will be maintained at the CAA site and at CSS in Fairfield, NJ. In the event that this customer ceases to use Covanta's services, these packages will be kept for at least five (5) years after the last shipment of waste has been received.

Appendix I
Definitions/Regulations

Municipal Solid Waste (MSW) shall be defined as:

a. Acceptable municipal solid waste includes household waste, commercial/retail waste, institutional waste, and other waste with emission characteristics similar to the acceptable wastes as determined by the permittee and approved by the Regional Air Permit Manager of the DEQ's Northern Regional Office (NRO), or a combination thereof as defined in this condition.

b. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities.

c. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, non-manufacturing activities at industrial facilities, and other similar establishments or facilities. All commercial/retail waste shall be mixed with other approved fuels prior to charging to the combustor in order to prevent discreet loads from being charged to a boiler.

d. Institutional waste includes material discarded by schools, non-medical waste discarded by hospitals, material discarded by non-manufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities.

e. Municipal solid waste does not include hazardous waste, as defined by federal and state waste regulations.

f. In addition, municipal solid waste shall not include industrial process or manufacturing waste, used oil, sewage sludge, wood pallets, construction, renovation, and demolition wastes, medical waste, motor vehicles (including motor vehicle parts or vehicle fluff).

g. The permittee shall monitor the waste delivered to the facility to ensure that only MSW as defined herein is being processed by the facility.

h. This definition of MSW may in the future be expanded to include additional waste types not identified in this condition.

i. In the event Covanta Alexandria/Arlington (CAA) wishes to process waste types other than MSW, as described above, or expand the definition of MSW, the permittee shall submit a request, including the applicable portion(s) of a Form 7, to the Regional Air Permit Manager of the DEQ's NRO. Information on waste composition and emissions characterizations shall be included with the submittal. The request and supporting documentation will be reviewed and evaluated to determine appropriate regulatory

applicability. The permit may be revised in accordance with the procedures established by the appropriate permitting regulations in the State of Virginia's Regulations for the Control and Abatement of Air Pollution. CAA shall receive DEQ approval prior to processing any waste types not identified herein.

(9 VAC 5-80-110, 9 VAC 5-80-1180, and Condition 6 of 03/16/10 mNSR Permit)

9VAC20-80-10. Definitions.

"**Special wastes**" mean solid wastes that are difficult to handle, require special precautions because of hazardous properties or the nature of the waste creates waste management problems in normal operations. (See Part VIII (9VAC20-80-630 et seq.) of this chapter.)

9VAC20-80-630. General.

A. The requirements and standards contained in this part apply to solid waste that requires special handling and precautions and are in addition to the general requirements contained in Parts V (9VAC20-80-240 et seq.) and VI (9VAC20-80-320 et seq.) of this chapter, as applicable.

1. Facilities may receive solid waste that requires special handling for processing or disposal only with specific approval of the director or by specific provisions within the facility permit. The operator should contact the department for advice about new or unusual wastes and proper handling techniques. If it is not clear that a particular waste is within the authorized wastes that a permitted facility may receive, it is required that the operator receive a letter of clarification from the department before receiving the waste.

2. Nothing in this part shall limit or affect the power of the director, by his order, to prohibit storage, treatment or disposal of any waste or require special handling requirements he determines are necessary to protect the public health or the environment.

3. The specific special wastes identified in this part are not all inclusive but intended to provide instructions for the wastes most frequently managed through solid waste management facilities. Other special wastes such as discarded chemicals and pesticides not regulated as hazardous wastes, oil spill cleanup, hazardous materials incident site cleanup, underground and aboveground storage site residues from cleanup, pesticide containers, hazardous wastes generated by conditionally exempt small quantity generators as defined by the hazardous waste regulations, compressed gas cylinders, and contaminated food products and fabrics requiring supervised disposal are examples of the type of special wastes for which approval by the director would be required before permitted solid waste management facilities could receive and dispose of these materials, unless the material is specifically included in the facility permit. Facilities with an approved special waste acceptance plan incorporated into the operations manual of the

facility permit are not required to obtain specific approval when the waste acceptance plan is followed.

B. The requirements and standards contained in this part also apply to specific materials that are used in a manner that constitutes disposal.

9VAC20-80-240. General.

A. Any person who constructs, or operates any solid waste disposal facility (e.g., sanitary landfill, construction/demolition/debris landfill, or an industrial waste landfill), not otherwise exempt under 9VAC20-80-60 D, shall comply with the requirements of this part. Further, all applications for permits pursuant to these standards shall demonstrate specific means proposed for compliance with requirements set forth in this part.

B. Solid waste disposal facilities shall be maintained and operated in accordance with the permit issued pursuant to this chapter, and in accordance with the approved design and intended use of the facility.

C. Hazardous wastes shall not be disposed or managed in solid waste disposal facilities subject to this chapter unless specifically authorized by the facility permit or the director.

D. Solid waste disposal facilities shall comply with the Financial Assurance Regulations for Solid Waste Disposal, Transfer, and Treatment Facilities (9VAC20-70) of the Virginia Waste Management Board.

E. Establishment, operation or maintenance of any solid waste disposal facility as an open dump is prohibited (see Part IV (9VAC20-80-170 et seq.) of this chapter).

F. A solid waste management facility regulated under Part VI (9VAC20-80-320 et seq.) of this chapter will become subject to the appropriate closure and post-closure care standards contained in this part if solid waste will remain after the closure of such a facility.

9VAC20-80-320. General.

A. Purpose, scope, and applicability.

1. Any person who designs, constructs, or operates any solid waste treatment or storage facility not otherwise exempt under 9VAC20-80-60 D shall comply with the requirements of this part.

2. Facilities shall be maintained and operated in accordance with the permit issued pursuant to this chapter, and in accordance with the approved design and intended use of the facility.

3. Hazardous wastes shall not be disposed or managed in solid waste management facilities subject to this chapter unless specified in the permit or by specific approval of the executive director.

B. Siting. Siting standards for each type of solid waste management facility in this part shall be governed by the siting standards as established for each separate facility.

C. Closure. Solid waste management facilities regulated under this part which, upon closure, will dispose of solid waste residues on-site, are subject to the ground water monitoring requirements in 9VAC20-80-250 D, closure and post-closure care requirements in 9VAC20-80-250 E and F, and permitting requirements of Part VII (9VAC20-80-480 et seq.) of this chapter. All other facilities shall close in accordance with the closure plan prepared in accordance with the requirements described in this part and 9VAC20-80-530 or 9VAC20-80-540, as applicable. Owners and operators of facilities that treat solid wastes are required to demonstrate financial assurance for closure in accordance with 9VAC20-70-10 et seq.

D. Solid waste left in place. Solid waste management facilities regulated under this part which place solid wastes or residues on site for disposal or leave such wastes in place after closure, are subject to the provisions of Part V (9VAC20-80-240 et seq.) of this chapter.

9VAC20-80-700. Soil contaminated with petroleum products.

A. Applicability.

1. The specific requirements contained in this section apply to requests by the owner or operator of a solid waste disposal facility for approval of disposal of soil contaminated solely with petroleum and petroleum products, including but not limited to diesel fuels, kerosene, gasoline, hydraulic fluids, jet engine fuel, and motor oil.

2. Any contaminated soil from a state other than Virginia that is classified as a hazardous waste in the state of origin shall be managed as a hazardous waste. Such wastes are not acceptable for disposal in a solid waste management facility in the Commonwealth.

B. Required information.

1. A statement from the generator certifying that the soil is non-hazardous waste as defined by the Virginia Hazardous Waste Management Regulations or federal regulations under Subtitle C, Resource Conservation and Recovery Act.

2. The amount of petroleum contaminated soil to be disposed.

3. A description of the sampling protocol and a copy of all laboratory analyses.

4. If generated in a state other than Virginia, certification from the generator that the waste is not considered a hazardous waste in its state of generation.

C. Testing requirements.

1. Analytical methods. Following methods shall be used in the analysis of the contaminated soil:

a. The presence of any free liquid shall be determined by EPA SW-846 method 9095, Paint Filter Liquids Test.

b. The total petroleum hydrocarbon (TPH) concentration shall be determined by using EPA SW-846 method 5035/8015B.

c. The concentration of benzene, toluene, ethyl benzene, and xylene (BTEX) shall be determined by using EPA SW-846 method 8021B.

d. The soil shall be tested for total organic halogens (TOX) in accordance with test methods contained in EPA SW-846.

e. The soil contaminated by leakage from an underground tank shall be tested for EP toxicity using EPA SW-846 method 1310. If the tank contained motor oil, the testing may be limited to heavy metals; tanks that contained all other petroleum products shall be tested for lead and any other compound covered by that test known to be present.

f. The soil contaminated as a result of anything other than leakage from an underground storage tank shall be tested by the Toxicity Characteristic Leaching Procedure (TCLP). If the soil was contaminated by virgin motor oil, the testing may be limited to heavy metals. Soil contaminated by any petroleum product other than virgin motor oil shall be tested for lead and any other compound covered by that test known to be present. If other TCLP constituents are not tested for, the generator shall be able to certify that the soil is not a hazardous waste, and certify that it did not contain those constituents not tested.

2. Sampling. A minimum of one composite sample shall be analyzed for each required test for every 100 cubic yards of soil to be disposed. In the case of soil reclaimed by thermal treatment, a minimum of one sample shall be analyzed for every production day composited hourly. For very large amounts of soil the sampling rates may be adjusted with the approval of the director.

3. a. In the case of soil contaminated with gasoline, the testing requirements for TCLP for lead, TOX, or the paint filter liquids test may be waived, if the department staff determines that the material was contaminated with unleaded gasoline, does not contain any halogenated hydrocarbons, or free liquids.

b. Waiver for BTEX testing requirements may be granted, if the generator can provide sufficient documentation that the material does not contain any benzene, toluene, ethyl benzene, or xylenes, and the amount of material to be disposed of is less than 20 cubic yards.

D. Disposal criteria.

1. Soils failing the TCLP test shall be managed in accordance with the Virginia Hazardous Waste Management Regulations.

2. Soils exhibiting greater than 100 milligram per kilogram (mg/kg) of TOX may not be disposed of until separate approval from the department is granted. This request shall document the cause for the high TOX level.

3. If the concentration of total BTEX is greater than 10 mg/kg or TPH is greater than 500 mg/kg, the soil cannot be disposed of in any sanitary or industrial landfill unless the facility permit expressly allows such disposal.

4. If the concentration of TPH is less than 500 mg/kg and total BTEX is less than 10 mg/kg, the disposal of the contaminated soil may be approved for permitted sanitary or industrial landfills equipped with liners and leachate collection systems.

5. Soil containing less than 50 mg/kg TPH and total BTEX less than 10 mg/kg may be used as clean fill. This soil, however, may not be disposed of closer than 100 feet of any regularly flowing surface water body or river, 500 feet of any well, spring or other ground water source of drinking water, and 200 feet from any residence, school, hospital, nursing home or recreational park area. In addition, if the soil is not to be disposed of on the generator's property, the generator shall notify the property owner that the soil is contaminated and with what it is contaminated.

E. Exemptions.

1. Contaminated soil resulting from a storage tank release or from a spill may be considered for an exemption from the limits and/or testing specified in subsection D of this section where the total volume of contaminated soil from a cleanup site is less than 20 cubic yards, and the contaminated soil is not a hazardous waste.

2. The director may approve the disposal of contaminated soil resulting from an emergency cleanup of a spill of petroleum products, provided that the waste is non-hazardous as defined by the Virginia Hazardous Waste Management Regulations or by federal regulations under Subtitle C of RCRA.

3. Soil contaminated with petroleum products resulting from ordinary household functions may be disposed with the general household waste.

9VAC20-80-10. Definitions.

"Commercial chemical product" means a chemical substance which is manufactured or formulated for commercial, agricultural or manufacturing use. This term includes a manufacturing chemical intermediate, off-specification chemical product, which, if it met specification, would have been a chemical product or intermediate. It includes any residues remaining in the container or the inner liner removed from the container that has been used to hold any of the above which have not been removed using the practices commonly employed to remove materials from that type of container and has more than one inch of residue remaining.

"Industrial waste" means any solid waste generated by manufacturing or industrial process that is not a regulated hazardous waste. Such waste may include, but is not limited to, waste resulting from the following manufacturing processes: Electric power generation; fertilizer/agricultural chemicals; food and related products/by-products; inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste.

"Liquid waste" means any waste material that is determined to contain "free liquids" as defined by this chapter. "Free liquids" means liquids which readily separate from the solid portion of a waste under ambient temperature and pressure as determined by the Paint Filter Liquids Test, Method 9095, U.S. Environmental Protection Agency, Publication SW-846.

§ 261.7 Residues of hazardous waste in empty containers.

(a)(1) Any hazardous waste remaining in either (i) an empty container or (ii) an inner liner removed from an empty container, as defined in paragraph (b) of this section, is not subject to regulation under parts 261 through 265, or part 268, 270 or 124 of this chapter or to the notification requirements of section 3010 of RCRA.

(2) Any hazardous waste in either (i) a container that is not empty or (ii) an inner liner removed from a container that is not empty, as defined in paragraph (b) of this section, is subject to regulation under parts 261 through 265, and parts 268, 270 and 124 of this chapter and to the notification requirements of section 3010 of RCRA.

(b)(1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in §§261.31, 261.32, or 261.33(e) of this chapter is empty if:

(i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, *e.g.,* pouring, pumping, and aspirating, *and*

(ii) No more than 2.5 centimeters (one inch) of residue remain on the bottom of the container or inner liner, *or*

(iii)(A) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 110 gallons in size, or

(B) No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons in size.

(2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.

(3) A container or an inner liner removed from a container that has held an acute hazardous waste listed in §§261.31, 261.32, or 261.33(e) is empty if:

(i) The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;

(ii) The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or

(iii) In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

§ 261.3 Definition of hazardous waste.

(a) A solid waste, as defined in §261.2, is a hazardous waste if:

(1) It is not excluded from regulation as a hazardous waste under §261.4(b); and

(2) It meets any of the following criteria:

(i) It exhibits any of the characteristics of hazardous waste identified in subpart C of this part. However, any mixture of a waste from the extraction, beneficiation, and processing of ores and minerals excluded under §261.4(b)(7) and any other solid waste exhibiting a characteristic of hazardous waste under subpart C is a hazardous waste only if it exhibits a characteristic that would not have been exhibited by the excluded waste alone if such mixture had not occurred, or if it continues to exhibit any of the characteristics exhibited by the non-excluded wastes prior to mixture. Further, for the purposes of applying the Toxicity Characteristic to such mixtures, the mixture is also a hazardous waste if it exceeds the maximum concentration for any contaminant listed in table I to §261.24 that would not have been exceeded by the excluded waste alone if the mixture had not occurred or if it continues to exceed the maximum concentration for any contaminant exceeded by the nonexempt waste prior to mixture.

(ii) It is listed in subpart D of this part and has not been excluded from the lists in subpart D of this part under §§260.20 and 260.22 of this chapter.

(iii) [Reserved]

(iv) It is a mixture of solid waste and one or more hazardous wastes listed in subpart D of this part and has not been excluded from paragraph (a)(2) of this section under §§260.20 and 260.22, paragraph (g) of this section, or paragraph (h) of this section; however, the following mixtures of solid wastes and hazardous wastes listed in subpart D of this part are not hazardous wastes (except by application of paragraph (a)(2)(i) or (ii) of this section) if the generator can demonstrate that the mixture consists of wastewater the discharge of which is subject to regulation under either section 402 or section 307(b) of the Clean Water Act (including wastewater at facilities which have eliminated the discharge of wastewater) and;

(A) One or more of the following solvents listed in §261.31—carbon tetrachloride, tetrachloroethylene, trichloroethylene—*Provided,* That the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 1 part per million; or

(B) One or more of the following spent solvents listed in §261.31—methylene chloride, 1,1,1-trichloroethane, chlorobenzene, o-dichlorobenzene, cresols, cresylic acid, nitrobenzene, toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, spent

chlorofluorocarbon solvents—provided that the maximum total weekly usage of these solvents (other than the amounts that can be demonstrated not to be discharged to wastewater) divided by the average weekly flow of wastewater into the headworks of the facility's wastewater treatment or pretreatment system does not exceed 25 parts per million; or

(C) One of the following wastes listed in §261.32, provided that the wastes are discharged to the refinery oil recovery sewer before primary oil/water/solids separation—heat exchanger bundle cleaning sludge from the petroleum refining industry (EPA Hazardous Waste No. K050), crude oil storage tank sediment from petroleum refining operations (EPA Hazardous Waste No. K169), clarified slurry oil tank sediment and/or in-line filter/separation solids from petroleum refining operations (EPA Hazardous Waste No. K170), spent hydrotreating catalyst (EPA Hazardous Waste No. K171), and spent hydrorefining catalyst (EPA Hazardous Waste No. K172); or

(D) A discarded commercial chemical product, or chemical intermediate listed in §261.33, arising from *de minimis* losses of these materials from manufacturing operations in which these materials are used as raw materials or are produced in the manufacturing process. For purposes of this paragraph (a)(2)(iv)(D), "de minimis" losses include those from normal material handling operations (e.g., spills from the unloading or transfer of materials from bins or other containers, leaks from pipes, valves or other devices used to transfer materials); minor leaks of process equipment, storage tanks or containers; leaks from well maintained pump packings and seals; sample purgings; relief device discharges; discharges from safety showers and rinsing and cleaning of personal safety equipment; and rinsate from empty containers or from containers that are rendered empty by that rinsing; or

(E) Wastewater resulting from laboratory operations containing toxic (T) wastes listed in subpart D of this part, Provided, That the annualized average flow of laboratory wastewater does not exceed one percent of total wastewater flow into the headworks of the facility's wastewater treatment or pre-treatment system or provided the wastes, combined annualized average concentration does not exceed one part per million in the headworks of the facility's wastewater treatment or pre-treatment facility. Toxic (T) wastes used in laboratories that are demonstrated not to be discharged to wastewater are not to be included in this calculation; or

(F) One or more of the following wastes listed in §261.32—wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157)—Provided that the maximum weekly usage of formaldehyde, methyl chloride, methylene chloride, and triethylamine (including all amounts that can not be demonstrated to be reacted in the process, destroyed through treatment, or is recovered, i.e., what is discharged or volatilized) divided by the average weekly flow of process wastewater prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 parts per million by weight; or

(G) Wastewaters derived from the treatment of one or more of the following wastes listed in §261.32—organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156).—Provided, that the maximum concentration of formaldehyde, methyl chloride, methylene chloride, and triethylamine prior to any dilutions into the headworks of the facility's wastewater treatment system does not exceed a total of 5 milligrams per liter.

(v) *Rebuttable presumption for used oil.* Used oil containing more than 1000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with halogenated hazardous waste listed in subpart D of part 261 of this chapter. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste (for example, to show that the used oil does not contain significant concentrations of halogenated hazardous constituents listed in appendix VIII of part 261 of this chapter).

(b) A solid waste which is not excluded from regulation under paragraph (a)(1) of this section becomes a hazardous waste when any of the following events occur:

(1) In the case of a waste listed in subpart D of this part, when the waste first meets the listing description set forth in subpart D of this part.

(2) In the case of a mixture of solid waste and one or more listed hazardous wastes, when a hazardous waste listed in subpart D is first added to the solid waste.

(3) In the case of any other waste (including a waste mixture), when the waste exhibits any of the characteristics identified in subpart C of this part.

(c) Unless and until it meets the criteria of paragraph (d) of this section:

(1) A hazardous waste will remain a hazardous waste.

(2)(i) Except as otherwise provided in paragraph (c)(2)(ii), (g) or (h) of this section, any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill residue, ash emission control dust, or leachate (but not including precipitation run-off) is a hazardous waste. (However, materials that are reclaimed from solid wastes and that are used beneficially are not solid wastes and hence are not hazardous wastes under this provision unless the reclaimed material is burned for energy recovery or used in a manner constituting disposal.)

(ii) The following solid wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste, unless they exhibit one or more of the characteristics of hazardous waste:

(A) Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332).

(B) Waste from burning any of the materials exempted from regulation by §261.6(a)(3)(iii) and (iv).

(C)(*1*) Nonwastewater residues, such as slag, resulting from high temperature metals recovery (HTMR) processing of K061, K062 or F006 waste, in units identified as rotary kilns, flame reactors, electric furnaces, plasma arc furnaces, slag reactors, rotary hearth furnace/electric furnace combinations or industrial furnaces (as defined in paragraphs (6), (7), and (13) of the definition for "Industrial furnace" in 40 CFR 260.10), that are disposed in subtitle D units, provided that these residues meet the generic exclusion levels identified in the tables in this paragraph for all constituents, and exhibit no characteristics of hazardous waste. Testing requirements must be incorporated in a facility's waste analysis plan or a generator's self-implementing waste analysis plan; at a minimum, composite samples of residues must be collected and analyzed quarterly and/or when the process or operation generating the waste changes. Persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements.

Constituent	Maximum for any single composite sample_TCLP (mg/L)
Generic exclusion levels for K061 and K062 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50
Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70.0
Generic exclusion levels for F006 nonwastewater HTMR residues	
Antimony	0.10
Arsenic	0.50

Barium	7.6
Beryllium	0.010
Cadmium	0.050
Chromium (total)	0.33
Cyanide (total) (mg/kg)	1.8
Lead	0.15
Mercury	0.009
Nickel	1.0
Selenium	0.16
Silver	0.30
Thallium	0.020
Zinc	70.0

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(2) A one-time notification and certification must be placed in the facility's files and sent to the EPA region or authorized state for K061, K062 or F006 HTMR residues that meet the generic exclusion levels for all constituents and do not exhibit any characteristics that are sent to subtitle D units. The notification and certification that is placed in the generators or treaters files must be updated if the process or operation generating the waste changes and/or if the subtitle D unit receiving the waste changes. However, the generator or treater need only notify the EPA region or an authorized state on an annual basis if such changes occur. Such notification and certification should be sent to the EPA region or authorized state by the end of the calendar year, but no later than December 31. The notification must include the following information: The name and address of the subtitle D unit receiving the waste shipments; the EPA Hazardous Waste Number(s) and treatability group(s) at the initial point of generation; and, the treatment standards applicable to the waste at the initial point of generation. The certification must be signed by an authorized representative and must state as follows: "I certify under penalty of law that the generic exclusion levels for all constituents have been met without impermissible dilution and that no characteristic of hazardous waste is exhibited. I am aware that there are significant penalties for submitting a false certification, including the possibility of fine and imprisonment."

(D) Biological treatment sludge from the treatment of one of the following wastes listed in §261.32—organic waste (including heavy ends, still bottoms, light ends, spent solvents, filtrates, and decantates) from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K156), and wastewaters from the production of carbamates and carbamoyl oximes (EPA Hazardous Waste No. K157).

(E) Catalyst inert support media separated from one of the following wastes listed in §261.32—Spent hydrotreating catalyst (EPA Hazardous Waste No. K171), and Spent hydrorefining catalyst (EPA Hazardous Waste No. K172).

(d) Any solid waste described in paragraph (c) of this section is not a hazardous waste if it

meets the following criteria:

(1) In the case of any solid waste, it does not exhibit any of the characteristics of hazardous waste identified in subpart C of this part. (However, wastes that exhibit a characteristic at the point of generation may still be subject to the requirements of part 268, even if they no longer exhibit a characteristic at the point of land disposal.)

(2) In the case of a waste which is a listed waste under subpart D of this part, contains a waste listed under subpart D of this part or is derived from a waste listed in subpart D of this part, it also has been excluded from paragraph (c) of this section under §§260.20 and 260.22 of this chapter.

(e) [Reserved]

(f) Notwithstanding paragraphs (a) through (d) of this section and provided the debris as defined in part 268 of this chapter does not exhibit a characteristic identified at subpart C of this part, the following materials are not subject to regulation under 40 CFR parts 260, 261 to 266, 268, or 270:

(1) Hazardous debris as defined in part 268 of this chapter that has been treated using one of the required extraction or destruction technologies specified in Table 1 of §268.45 of this chapter; persons claiming this exclusion in an enforcement action will have the burden of proving by clear and convincing evidence that the material meets all of the exclusion requirements; or

(2) Debris as defined in part 268 of this chapter that the Regional Administrator, considering the extent of contamination, has determined is no longer contaminated with hazardous waste.

(g)(1) A hazardous waste that is listed in subpart D of this part solely because it exhibits one or more characteristics of ignitability as defined under §261.21, corrosivity as defined under §261.22, or reactivity as defined under §261.23 is not a hazardous waste, if the waste no longer exhibits any characteristic of hazardous waste identified in subpart C of this part.

(2) The exclusion described in paragraph (g)(1) of this section also pertains to:

(i) Any mixture of a solid waste and a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (a)(2)(iv) of this section; and

(ii) Any solid waste generated from treating, storing, or disposing of a hazardous waste listed in subpart D of this part solely because it exhibits the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (c)(2)(i) of this section.

(3) Wastes excluded under this section are subject to part 268 of this chapter (as

applicable), even if they no longer exhibit a characteristic at the point of land disposal.

(4) Any mixture of a solid waste excluded from regulation under §261.4(b)(7) and a hazardous waste listed in subpart D of this part solely because it exhibits one or more of the characteristics of ignitability, corrosivity, or reactivity as regulated under paragraph (a)(2)(iv) of this section is not a hazardous waste, if the mixture no longer exhibits any characteristic of hazardous waste identified in subpart C of this part for which the hazardous waste listed in subpart D of this part was listed.

(h)(1) Hazardous waste containing radioactive waste is no longer a hazardous waste when it meets the eligibility criteria and conditions of 40 CFR part 266, Subpart N ("eligible radioactive mixed waste").

(2) The exemption described in paragraph (h)(1) of this section also pertains to:

(i) Any mixture of a solid waste and an eligible radioactive mixed waste; and

(ii) Any solid waste generated from treating, storing, or disposing of an eligible radioactive mixed waste.

(3) Waste exempted under this section must meet the eligibility criteria and specified conditions in 40 CFR 266.225 and 40 CFR 266.230 (for storage and treatment) and in 40 CFR 266.310 and 40 CFR 266.315 (for transportation and disposal). Waste that fails to satisfy these eligibility criteria and conditions is regulated as hazardous waste.

§ 261.5 Special requirements for hazardous waste generated by conditionally exempt small quantity generators.

(a) A generator is a conditionally exempt small quantity generator in a calendar month if he generates no more than 100 kilograms of hazardous waste in that month.

(b) Except for those wastes identified in paragraphs (e), (f), (g), and (j) of this section, a conditionally exempt small quantity generator's hazardous wastes are not subject to regulation under parts 262 through 266, 268, and parts 270 and 124 of this chapter, and the notification requirements of section 3010 of RCRA, provided the generator complies with the requirements of paragraphs (f), (g), and (j) of this section.

(c) When making the quantity determinations of this part and 40 CFR part 262, the generator must include all hazardous waste that it generates, except hazardous waste that:

(1) Is exempt from regulation under 40 CFR 261.4(c) through (f), 261.6(a)(3), 261.7(a)(1), or 261.8; or

(2) Is managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities as defined in 40 CFR 260.10; or

(3) Is recycled, without prior storage or accumulation, only in an on-site process subject to regulation under 40 CFR 261.6(c)(2); or

(4) Is used oil managed under the requirements of 40 CFR 261.6(a)(4) and 40 CFR part 279; or

(5) Is spent lead-acid batteries managed under the requirements of 40 CFR part 266, subpart G; or

(6) Is universal waste managed under 40 CFR 261.9 and 40 CFR part 273.

(d) In determining the quantity of hazardous waste generated, a generator need not include:

(1) Hazardous waste when it is removed from on-site storage; or

(2) Hazardous waste produced by on-site treatment (including reclamation) of his hazardous waste, so long as the hazardous waste that is treated was counted once; or

(3) Spent materials that are generated, reclaimed, and subsequently reused on-site, so long as such spent materials have been counted once.

(e) If a generator generates acute hazardous waste in a calendar month in quantities greater than set forth below, all quantities of that acute hazardous waste are subject to full regulation under parts 262 through 266, 268, and parts 270 and 124 of this chapter, and the notification requirements of section 3010 of RCRA:

(1) A total of one kilogram of acute hazardous wastes listed in §§261.31, 261.32, or 261.33(e).

(2) A total of 100 kilograms of any residue or contaminated soil, waste, or other debris resulting from the clean-up of a spill, into or on any land or water, of any acute hazardous wastes listed in §§261.31, 261.32, or 261.33(e).

[Comment: "Full regulation" means those regulations applicable to generators of greater than 1,000 kg of non-acutely hazardous waste in a calendar month.]

(f) In order for acute hazardous wastes generated by a generator of acute hazardous wastes in quantities equal to or less than those set forth in paragraph (e)(1) or (2) of this section to be excluded from full regulation under this section, the generator must comply with the following requirements:

(1) Section 262.11 of this chapter;

(2) The generator may accumulate acute hazardous waste on-site. If he accumulates at any time acute hazardous wastes in quantities greater than those set forth in paragraph (e)(1) or (e)(2) of this section, all of those accumulated wastes are subject to regulation under parts 262 through

266, 268, and parts 270 and 124 of this chapter, and the applicable notification requirements of section 3010 of RCRA. The time period of §262.34(a) of this chapter, for accumulation of wastes on-site, begins when the accumulated wastes exceed the applicable exclusion limit;

(3) A conditionally exempt small quantity generator may either treat or dispose of his acute hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage, or disposal facility, either of which, if located in the U.S., is:

(i) Permitted under part 270 of this chapter;

(ii) In interim status under parts 270 and 265 of this chapter;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under part 271 of this chapter;

(iv) Permitted, licensed, or registered by a State to manage municipal solid waste and, if managed in a municipal solid waste landfill is subject to Part 258 of this chapter;

(v) Permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit after January 1, 1998, is subject to the requirements in §§257.5 through 257.30 of this chapter; or

(vi) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

(vii) For universal waste managed under part 273 of this chapter, a universal waste handler or destination facility subject to the requirements of part 273 of this chapter.

(g) In order for hazardous waste generated by a conditionally exempt small quantity generator in quantities of less than 100 kilograms of hazardous waste during a calendar month to be excluded from full regulation under this section, the generator must comply with the following requirements:

(1) Section 262.11 of this chapter;

(2) The conditionally exempt small quantity generator may accumulate hazardous waste on-site. If he accumulates at any time more than a total of 1000 kilograms of his hazardous wastes, all of those accumulated wastes are subject to regulation under the special provisions of part 262 applicable to generators of between 100 kg and 1000 kg of hazardous waste in a calendar month as well as the requirements of parts 263 through 266, 268, and parts 270 and 124 of this chapter, and the applicable notification requirements of section 3010 of RCRA. The time period of §262.34(d) for accumulation of wastes on-site begins for a conditionally exempt small quantity generator when the accumulated wastes exceed 1000 kilograms;

(3) A conditionally exempt small quantity generator may either treat or dispose of his hazardous waste in an on-site facility or ensure delivery to an off-site treatment, storage or disposal facility, either of which, if located in the U.S., is:

(i) Permitted under part 270 of this chapter;

(ii) In interim status under parts 270 and 265 of this chapter;

(iii) Authorized to manage hazardous waste by a State with a hazardous waste management program approved under part 271 of this chapter;

(iv) Permitted, licensed, or registered by a State to manage municipal solid waste and, if managed in a municipal solid waste landfill is subject to Part 258 of this chapter;

(v) Permitted, licensed, or registered by a State to manage non-municipal non-hazardous waste and, if managed in a non-municipal non-hazardous waste disposal unit after January 1, 1998, is subject to the requirements in §§257.5 through 257.30 of this chapter; or

(vi) A facility which:

(A) Beneficially uses or reuses, or legitimately recycles or reclaims its waste; or

(B) Treats its waste prior to beneficial use or reuse, or legitimate recycling or reclamation; or

(vii) For universal waste managed under part 273 of this chapter, a universal waste handler or destination facility subject to the requirements of part 273 of this chapter.

(h) Hazardous waste subject to the reduced requirements of this section may be mixed with non-hazardous waste and remain subject to these reduced requirements even though the resultant mixture exceeds the quantity limitations identified in this section, unless the mixture meets any of the characteristics of hazardous waste identified in subpart C.

(i) If any person mixes a solid waste with a hazardous waste that exceeds a quantity exclusion level of this section, the mixture is subject to full regulation.

(j) If a conditionally exempt small quantity generator's wastes are mixed with used oil, the mixture is subject to part 279 of this chapter. Any material produced from such a mixture by processing, blending, or other treatment is also so regulated.

9VAC20-80-650. Wastes containing polychlorinated biphenyls (PCBs).

A. Definitions. The definitions provided in this subsection are derived from definitions in 40 CFR 761.3 and are provided here for the convenience of the regulated community. The definitions here have been altered from those appearing in the federal regulation in order to simplify the definitions to indicate the specific types of items that can or cannot be considered for disposal in a sanitary landfill. These definitions are not identical to the federal definitions. All terms that are used in this section and that are not defined in this subsection shall have the same meaning as in Part I (9VAC20-80-10 et seq.) of this chapter or 40 CFR 761.3 as applicable.

Nothing in this section shall be deemed to allow management other than as required by federal law and regulation.

"PCB bulk product waste" means:

1. Nonliquid bulk wastes or debris from the demolition of buildings and other man-made structures manufactured, coated, or serviced with PCBs. PCB bulk product waste does not include debris from the demolition of buildings or other man-made structures that is contaminated by spills from regulated PCBs which have not been disposed of, decontaminated, or otherwise cleaned in accordance with 40 CFR Part 761 Subpart D.

2. PCB containing wastes from the shredding of automobiles, household appliances, or industrial appliances where PCB small capacitors have been removed (shredder fluff).

3. Plastics (such as plastic insulation from wire or cable; radio, television and computer casings; vehicle parts; or furniture laminates); preformed or molded rubber parts and components; applied dried paints, varnishes waxes or similar coatings or sealants; Galbestos.

"PCB cleanup waste" means nonliquid cleaning materials and personal protective equipment at any concentration including nonporous surfaces and other nonliquid materials such as rags, gloves, booties, other disposable personal protective equipment, and similar materials.

"PCB-contaminated electrical equipment" means any electrical equipment including, but not limited to, transformers (including those used in railway locomotives and self-propelled cars), capacitors, circuit breakers, reclosers, voltage regulators, switches (including sectionalizers and motor starters), electromagnets, and cable, that contains PCBs at concentrations of >=50 ppm and <500 ppm in the contaminating fluid. In the absence of liquids, electrical equipment is PCB-Contaminated if it has PCBs at >10 ig/100 cm^2 and <100 ig/100 cm^2 as measured by a standard wipe test (as defined in 40 CFR 761.123) of a non-porous surface.

"PCB remediation waste" means soil, rags, and other debris generated as a result of any PCB spill cleanup, including, but not limited to:

1. Environmental media containing PCBs, such as soil and gravel; dredged materials, such as sediments, settled sediment fines, and aqueous decantate from sediment.

2. Sewage sludge containing <50 ppm PCBs; PCB sewage sludge; commercial or industrial sludge contaminated as the result of a spill of PCBs including sludges located in or removed from any pollution control device; aqueous decantate from an industrial sludge.

3. Buildings and other man-made structures, such as concrete or wood floors or walls contaminated from a leaking PCB or PCB-Contaminated transformer, porous surfaces and nonporous surfaces.

B. Solid wastes containing PCB concentrations between 1.0 ppm and 50 ppm are restricted to disposal in sanitary landfills or industrial waste landfills with leachate collection, liners, and

appropriate ground water monitoring as required in Part V (9VAC20-80-240 et seq.) of this chapter, except as allowed in subsection C of this section.

C. Other PCB wastes.

1. PCB bulk product wastes with concentrations above 50 ppm may be approved for disposal by the director on a case-by-case basis. Submissions prepared for the director's decision will include a description of the PCB waste indicating the material proposed for disposal and how the federal regulations under 40 CFR 761.62 apply to the material. Consistent with the procedures in 40 CFR Part 761, PCB bulk product wastes that are shredder fluff or plastics as defined above need not be tested for PCBs prior to disposal. However, other PCB bulk product waste that has been sampled in accordance with the protocols set out in 40 CFR Part 761 Subpart R and may be considered for disposal if the waste leaches PCBs at less than 10 %v(508)%E2%v/L measured using a procedure used to simulate leachate generation. Requests for a director's determination must come from a permitted landfill. Alternatively, a landfill may modify its permit to incorporate a special waste acceptance plan which addresses PCB wastes. Facilities requesting to receive PCB bulk product waste must also meet the following provisions:

a. The unit to receive the waste must have a liner system meeting the requirements of 9VAC20-80-250 B 9 or an alternate liner approved under the provisions of 9VAC20-80-780.

b. The unit to receive the waste must have a leachate collection system consistent with 9VAC20-80-290.

c. Ground water monitoring may not have detected Table 5.1 constituents above the maximum contaminant levels (MCLs) promulgated under §141.2 of the Safe Drinking Water Act (40 CFR Part 141 Subpart B) during the active life of the facility.

2. Consistent with 40 CFR Part 761, PCB articles such as PCB-contaminated electrical equipment, PCB hydraulic machines, or pipe that have previously contained PCB, which have been drained, may be disposed of in a sanitary landfill with leachate collection, liners, and appropriate ground water monitoring as required in Part V of this chapter. PCB testing, draining and other preparation for disposal of the equipment, if required, will be consistent with 40 CFR Part 761.

D. Consistent with 40 CFR Part 761, PCB remediation waste with PCB concentrations =50 ppm may not be disposed of in a sanitary landfill. PCB remediation waste includes but is not limited to items such as soil, sediments, dredged materials, muds, and sludge. PCB cleanup waste as defined above may be disposed of in a sanitary landfill with liners and a leachate collection system.

9VAC20-120-10. Definitions.

"Regulated medical waste" means solid wastes defined to be regulated medical wastes in Part III (9VAC20-120-80 et seq.) of this chapter.

9VAC20-120-140. Characteristics of regulated medical waste.

A solid waste is a regulated medical waste if it meets either of the two criteria of this section:

1. Any solid waste, as defined in this chapter is a regulated medical waste if it is suspected by the health care professional in charge of being capable of producing an infectious disease in humans. A solid waste shall be considered to be capable of producing an infectious disease if it has been or is likely to have been contaminated by an organism likely to be pathogenic to healthy humans, such organism is not routinely and freely available in the community, and if such organism has a significant probability of being present in sufficient quantities and with sufficient virulence to transmit disease. If the exact cause of a patient's illness is unknown, but the health care professional in charge suspects a contagious disease is the cause, the likelihood of pathogen transmission shall be assessed based on the pathogen suspected of being the cause of the illness.

2. Any solid waste that is not excluded from regulation is a regulated medical waste if it is listed in 9VAC20-120-150.

9VAC20-120-150. Lists of controlled regulated medical wastes.

In addition to wastes described by the characteristics set forth in 9VAC20-120-140, each solid waste or solid waste stream on the following lists is subject to this chapter, unless exempted in 9VAC20-120-120 or excluded in 9VAC20-120-130.

1. Cultures and stock of microorganisms and biologicals. Discarded cultures, stocks, specimens, vaccines and associated items likely to have been contaminated by them are regulated medical wastes if they are likely to contain organisms likely to be pathogenic to healthy humans. Discarded etiologic agents are regulated medical waste. Wastes from the production of biologicals and antibiotics likely to have been contaminated by organisms likely to be pathogenic to healthy humans are regulated medical wastes.

2. Human blood and human body fluids. Wastes consisting of human blood or human body fluids or items contaminated with human blood or human body fluids.

3. Tissues and other anatomical wastes. All human anatomical wastes and all wastes that are human tissues, organs, or body parts are regulated medical waste.

4. Sharps. Sharps likely to be contaminated with organisms that are pathogenic to healthy humans, and all needles, syringes with attached needles, suture needles, and scalpels are regulated medical wastes. This includes sharps generated through veterinary practice.

5. Animal carcasses, body parts, bedding and related wastes. When animals are intentionally infected with organisms likely to be pathogenic to healthy humans for the purposes of research, in vivo testing, production of biological materials or any other reason; the animal carcasses, body parts, bedding material and all other wastes likely to have been contaminated are regulated medical wastes when discarded, disposed of or placed in accumulated storage.

6. Any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill of any regulated medical waste.

7. Any solid waste contaminated by or mixed with regulated medical waste.

Appendix II
Permits

Air

PSD permit	Exp. Date: None
mNSR permit	Exp Date: None
Title V Operating Permit	Exp. Date: 02/28/07 (Under Permit Shield)

Water

SIU Permit	Exp. Date: 01/31/2012
VPDES Permit	Exp. Date: 06/30/2014

Solid Waste

Solid Waste Permit By Rule	Exp. Date: None

APPENDIX III

FORMS

1. **Material Characterization Form (MCF)**
2. **Material Characterization Form (Form 1G-General Information)**
3. **Addendum to Form 1G**
4. **Virginia Destination Addendum Form for Reporting the Presence of Air Pollutants (HAP's)**
5. **Pre-shipment Notification/Certificate of Destruction**

APPENDIX B
September 27, 2010 PSD Permit

NRO-287-10

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

September 27, 2010

Mr. Bryan Donnelly
Facility Manager
Covanta Alexandria/Arlington
5301 Eisenhower Avenue
Alexandria, Virginia 22304

Registration No.: 71895

Dear Mr. Donnelly:

Attached is a minor amendment to your new source review permit dated February 4, 2002, as amended March 16, 2010 to modify and operate a municipal solid waste incineration facility in accordance with the provisions of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution (Regulations). Permit changes are reflected in Condition 5, Page 5; Conditions 115A and 115C, page 27; Conditions 151A and 151B, page 35; 160A, page 37; and Appendix A. This amended permit supersedes your permit dated February 4, 2002, as amended March 16, 2010.

This permit contains legally enforceable conditions. Failure to comply may result in appropriate enforcement. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on September 22, 2010.

This permit approval to modify and operate shall not relieve Covanta Alexandria/Arlington of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code (VAC) 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-200 also provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

Event	Date	Initials
Code: PSD	9/27/10	EA
Scanned		
QC		

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact the regional office at 703.583.3858.

Sincerely,

Terry H. Darton
Regional Air Permit Manager

TAF/THD/EHA/10-287-mnsr

Attachment: Permit
Appendix A

cc: Director, OAPP (electronic file submission)
Manager, Air Compliance
File

NRO-287-10

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

PREVENTION OF SIGNIFICANT DETERIORATION PERMIT
STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

This permit includes designated equipment subject to New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) for source categories.

This permit supersedes your permit dated February 4, 2002 as amended March 16, 2010.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Covanta Alexandria/Arlington, Incorporated
40 Lane Road, CN 2615
Fairfield, NJ 07007
Registration No. 71895
County-Plant No. 0080-0139

is authorized to modify and operate

A waste-to-energy facility containing three 121.8 MMBtu per hour municipal waste combustors

located at

5301 Eisenhower Avenue
Alexandria, Virginia

in accordance with Part I – Part XIII, and Appendix A of this permit.

Approved on September 27, 2010

Thomas A. Faha,
Regional Director

Permit Consists of **52** pages and Appendix A
Part I - Facility Description 1 to 2.
Part II - Process Requirements 3 to 4A.
Part III – Limitations 5 to 13A.
Part IV – Operating Limits 14 to 16.
Part V – Operator Training and Certification 17 to 26.
Part VI – Test Methods and Procedures 27 to 113.
Part VII – Monitoring 114 to 135.
Part VIII – Notification, Recordkeeping and Reporting 136 to 170.
Part IX – Compliance 171 to 174.
Part X – Compliance Schedules 175 to 176.
Part XI – General Conditions 177 to 188.
Part XII – State Only Requirements 1 to 5.
Part XIII – Document List, 58 items.
Source Testing Report Format.
Appendix A

TABLE OF CONTENTS

I. Facility Description 4
II. Process Requirements 4
III. Limitations 5
IV. Operating Limits 10
V. Operator Training and Certification 11
VI. Test Methods and Procedures 13
Particulate Matter 14
Opacity 14
Cadmium and Lead 15
Mercury 16
Sulfur Dioxide 18
Hydrogen Chloride 20
Dioxin/Furan 22
Nitrogen Oxides 23
Fugitive Ash 26
Carbon Mass 26
VII. Monitoring 27
VIII. Notification, Recordkeeping and Reporting 31
Records 32
Annual Report 36
Semiannual Report 37
Initial Performance Test 39
IX. Compliance 39
X. Compliance Schedules 40
XI. General Conditions 41
XII. State Only Requirements 46
XIII. Document List 47

PART I - Facility Description

1. The waste-to-energy plant is located at 5301 Eisenhower Avenue, the site of the former Alexandria Incinerator.

2. Modification and operation shall be conducted as proposed in the initial permit application dated March 28, 1984, revised June 1, 1984 and July 24, 1984, as changed by Covanta Alexandria/Arlington, Inc. letters of February 3, 1988, April 5, 1988, October 18, 1991, November 1, 1991, September 11, 1992, May 1, 2000, and September 10, 2010. The permit application and supporting documents (see Document List) are a part of this permit. Any changes in the permit application or supporting document specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.
(9 VAC 5-50-390, 9 VAC 5-80-10 K 4 and 9 VAC 5-170-160)

PART II – Process Requirements

3. Equipment List –
The equipment that has been constructed and operated consists of:
- fabric filters/baghouse;
- lime slurry injection system (semi-dry scrubber);
- ammonia injection system (Selective Non-Catalytic Reduction);
- one underground storage tank for fuel oil with a total capacity of 20,000 gallons;
- one lime storage silo with rated capacity of 2548 ft^3/hr; and
- one carbon storage silo with a rated capacity of 2010 ft^3/hr.

Previously permitted equipment at this facility prior to the date of this permit consists of:
- three municipal waste combustors (MWC's) each nominally rated at 121.8 MMBtu per hour based on a higher heating value (HHV) of 4,500 Btu/lb for MSW;
- three municipal waste combustor trains, for this permit a municipal waste combustor train is defined as the feed hopper, feed chute, charging equipment, stoker/grate unit, furnace section, second pass, generating section, superheater, economizer, induced draft fan and flue;
- two nominal 12.8 megawatt turbine/electric generators;
- municipal waste handling and storage facilities; and
- activated carbon injection system.

Exempted equipment at this facility prior to the date of this permit consists of:
- ventilation system above the residue handling area.

The equipment to be removed consists of:
- three 4-field United McGill (or equivalent) electrostatic precipitators; and
- dry lime injection system.
(9 VAC 5-170-160)

4. Particulate matter emissions from the municipal waste combustors shall be controlled by fabric filters. Each fabric filter shall be provided with adequate access for inspection and shall be in operation when the municipal waste combustors are operating. (9 VAC 5-50-260)

4A. Particulate matter emissions from the carbon silo and lime silo shall be controlled by fabric filters. The fabric filters shall be provided with adequate access for inspection. (9 VAC 5-50-90)

PART III - Limitations

5. Municipal Solid Waste (MSW) –

   a. Acceptable municipal solid waste includes household waste, commercial/retail waste, institutional waste, and other waste with emission characteristics similar to the acceptable wastes as determined by the permittee and approved by the Regional Air Permit Manager of the DEQ's Northern Regional Office (NRO), or a combination thereof as defined in this condition.

   b. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities.

   c. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, non-manufacturing activities at industrial facilities, and other similar establishments or facilities. All commercial/retail waste shall be mixed with other approved fuels prior to charging to the combustor in order to prevent discreet loads from being charged to a boiler.

   d. Institutional waste includes material discarded by schools, non-medical waste discarded by hospitals, material discarded by non-manufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities.

   e. Municipal solid waste does not include hazardous waste, as defined by federal and state waste regulations.

   f. In addition, municipal solid waste shall not include industrial process or manufacturing waste, used oil, sewage sludge, wood pallets, construction, renovation, and demolition wastes, medical waste, motor vehicles (including motor vehicle parts or vehicle fluff) unless approved via the approved Material Review Process (MRP).

   g. The permittee shall monitor the waste delivered to the facility to ensure that only MSW as defined herein is being processed by the facility.

   h. This definition of MSW may in the future be expanded to include additional waste types not identified in this condition. To facilitate any revision, the permittee shall submit requests in writing to the Regional Air Permit Manager of the DEQ's NRO. Information

on waste composition and emissions characterizations shall be included with any submittal. The request and supporting information will be reviewed and evaluated to determine new source review applicability. The permit will be revised in accordance with the procedures established in the appropriate permitting regulations in the Regulations for the Control and Abatement of Air Pollution.

i. Any waste not classified as hazardous waste, and not covered by the definition of MSW above, shall be reviewed in accordance with the approved MRP (see Appendix A).

(9 VAC 5-170-160)

6. The approved fuels for the municipal waste combustors are municipal waste and No. 2 fuel oil. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-170-160)

6A. The No. 2 fuel oil shall meet the ASTM specification D396-78 for No. 2 fuel oil. The maximum sulfur content per shipment shall not exceed 0.5 weight percent.
(40 CFR 60.42b(j))

7. The firing of each municipal waste combustor with fuel oil shall not exceed an annual capacity factor of 10 percent. The annual capacity factor is determined by dividing the actual heat input to the municipal waste combustor unit during the calendar year from the combustion of Number 2 fuel oil by the potential heat input to the municipal waste combustor unit if the municipal waste combustor unit had been operating 8,760 hours at the maximum design heat input capacity.
(9 VAC 5-50-410, 40 CFR 60.43b(d), 40 CFR 60.43b(e) and 40 CFR 60.44b(c))

8. Each municipal waste combustor train design includes a No. 2 fuel oil burner for use in maintaining appropriate municipal waste combustor temperatures.
(9 VAC 5-170-160)

9. The following standards, contained in 9 VAC 5 40-Article 46 and 40 CFR 62 Subpart FFF, apply to the emissions from each municipal waste combustor:

a. Particulate Matter: 27 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.
(9 VAC 5-40-7970)

b. Carbon Monoxide: 100 parts per million by volume, corrected to 7 percent oxygen, dry basis, calculated as an arithmetic average (4-hour block average). A 4-hour block average is defined as the average of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over 4-hour periods of time from 12:00 midnight to 4 a.m., 4a.m. to 8 a.m., 8 a.m. to 12:00 noon, 12:00 noon to 4 p.m., 4p.m. to 8 p.m., and 8 p.m. to 12:00 midnight.
(9 VAC 5-40-7980 and 9 VAC 5-40-7960C)

c. Sulfur Dioxide: 29 parts per million by volume or 25 percent of the potential sulfur dioxide emission concentration (75 percent reduction by weight or volume), corrected to 7 percent oxygen, dry basis, whichever is less stringent. Compliance with this standard is based on a 24-hour daily geometric mean. A 24-hour daily average is defined as either the arithmetic or geometric mean (as specified) of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over a 24-hour period between 12:00 midnight and the following midnight.
(9 VAC 5-40-8020 and 9 VAC 5-40-7960C)

d. Nitrogen Oxides: 205 parts per million by volume, corrected to 7 percent oxygen, dry basis, based on a 24-hour daily arithmetic average. A 24-hour daily average is defined as either the arithmetic or geometric mean (as specified) of all hourly emission concentrations when the affected facility is operating and combusting municipal solid waste measured over a 24-hour period between 12:00 midnight and the following midnight.
(9 VAC 5-40-8050 and 9 VAC 5-40-7960C)

e. Hydrogen Chloride: 29 parts per million by volume or 5 percent of the potential hydrogen chloride emission concentration (95 percent reduction by weight or volume), corrected to 7 percent oxygen, dry basis, whichever is less stringent.
(9 VAC 5-40-8030)

f. Cadmium: 0.040 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.
(9 VAC 5-40-7990)

g. Lead: 0.44 milligrams per dry standard cubic meter, corrected to 7 percent oxygen.
(9 VAC 5-40-8000)

h. Mercury: 0.080 milligrams per dry standard cubic meter or 15 percent of the potential mercury emission concentration (85 percent reduction by weight), corrected to 7 percent oxygen, whichever is less stringent.
(9 VAC 5-40-8010)

i. Dioxin/Furan: 30 nanograms per dry standard cubic meter, expressed as total mass dioxins/furans, corrected to 7 percent oxygen.
(9 VAC 5-40-8040)

10. Unit Emission Limits
Emissions from the operation of EACH municipal waste combustor shall not exceed the limitations specified below, as of August 22, 2000:

	lb/MMBtu	lbs/hr	tons/yr
Particulate Matter	0.07		35.3
Particulate Matter 10 (PM_{10})	0.07		35.3

Sulfur Dioxide	0.14***	16.6***	69.0
Volatile Organic Compounds	0.006		3.0
Nitrogen Oxides (as NO_2)	0.55		277.0
Carbon Monoxide	0.56*	68.5*	48.5**
Municipal Waste Combustor Metals (measured as particulate matter & made up of the following:)	6.47×10^{-3}		3.42
Cadmium	2.7×10^{-4}		0.14
Lead	4.4×10^{-3}		2.32
Mercury	1.8×10^{-3}***		0.96
Municipal Waste Combustor Acid Gases (measured as the sum of SO_2 and HCl)	0.48***	58.3***	242
Hydrogen Chloride	0.34***		173.0
Municipal Waste Combustor Organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans)	1.26×10^{-7}		6.7×10^{-5}
Total Dioxins and Furans	1.26×10^{-7}		6.7×10^{-5}
Beryllium	4.9×10^{-7}	6.0×10^{-5}	2.63×10^{-4}

* Maximum short-term carbon monoxide emission rate.
** Based on an average annual carbon monoxide emission rate of 0.096 lb/MMBtu, calculated monthly as the average of each consecutive 12 month period.
***For HCl, SO_2 and mercury, compliance will be demonstrated on a short-term basis by meeting the lb/MMBtu and lbs/hr emission limits specified in this condition or by the percent removal requirements specified in Condition #9.

Except for the lb/MMBtu and lb/hr HCl, SO_2 and mercury emission limits, the lb/MMBtu, lbs/hr and tons/yr emission limits in this condition may not be an indicator of compliance with the emission concentration and percent removal standards contained in condition #9. Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period unless specified otherwise.

(9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280, 40 CFR 61.32(a) and 9 VAC 5-50-180)

10A. Particulate matter emissions from the carbon and lime silos shall each not exceed 22.22 lbs/hr.
(9 VAC 5-40-270)

11. Facility Emission Limits
Total emissions from the operation of the municipal waste combustor plant shall not exceed the limitations specified below, as of the date this permit application was deemed complete:

	tons/yr
Particulate Matter	106
Particulate Matter 10 (PM_{10})	106
Sulfur Dioxide	206
Volatile Organic Compounds	9.1
Nitrogen Oxides (as NO_2)	830
Carbon Monoxide	145.5**
Municipal Waste Combustor Metals (measured as particulate matter & made up of the following:)	10.27
Cadmium	0.43
Lead	6.96
Mercury	2.88
Municipal Waste Combustor Acid Gases (measured as the sum of SO_2 and HCl)	723
Hydrogen Chloride	517
Municipal Waste Combustor Organics	
Total Dioxins and Furans	2.01×10^{-4}
Beryllium	7.89×10^{-4}

** Based on an average annual carbon monoxide emission rate of 0.096 lb/MMBtu, calculated monthly as the average of each consecutive 12 month period.

The tons/yr emission limits may not be an indicator of compliance with the emission concentration standards contained in condition #9. Annual emissions shall be calculated monthly as the sum of each consecutive 12 month period unless specified otherwise.

(9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280 and 9 VAC 5-50-180)

12. Standard for Visible Emissions:

The provisions of Article 1 (9 VAC 5-40-60 et seq.) of 9 VAC 5 Chapter 40 (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply except that the provisions of 9 VAC 5-40-80 shall be replaced by the following:

Covanta Alexandria/Arlington, Inc. shall not cause or permit to be discharged into the atmosphere from any affected facility any gases that exhibit greater than 10 percent opacity (6-minute average).

(9 VAC 5-40-8060.)

12A. Visible Emissions from the carbon and lime silos shall not exceed 20% opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 30% opacity.

(9 VAC 5-50-80)

13. Standard for Fugitive Dust/Emissions:

a. The provisions of Article 1 (9 VAC 5-40-60 et seq.) of 9 VAC 5 Chapter 40 (Emission Standards for Visible Emissions and Fugitive Dust/Emissions, Rule 4-1) apply except as provided in sections b. through d. of this condition.

b. Covanta Alexandria/Arlington, Inc. shall not cause to be discharged to the atmosphere visible emissions of combustion ash from an ash conveying system (including conveyor transfer points) in excess of 5 percent of the observation period (i.e., 9 minutes per 3-hour period), as determined by Reference Method 22 observations as specified in 9 VAC 5-40-8140 H, except as provided in sections c. and d. of this condition.

c. The emission limit specified in section b. of this condition shall not cover visible emissions discharged inside buildings or enclosures of ash conveying systems; however, the emission limit specified in section b. of this condition shall cover visible emissions discharged to the atmosphere from buildings or enclosures of ash conveying systems.

d. The provisions specified in section b. of this condition shall not apply during maintenance and repair of ash conveying systems.

(9 VAC 5-40-8070)

13A. The permittee shall not emit particulate matter in excess of 0.18 grams per dry standard cubic meter (0.08 grains per dry standard cubic foot), corrected to 12% CO_2, from each municipal waste combustor.
(40 CFR 60.52)

PART IV- Operating Limits

14. The annual steam production for the facility shall not exceed 1,170,400 tons on the basis of an average value of 3.34 pounds of steam produced per pound of municipal solid waste (MSW) processed, calculated monthly as the sum of each consecutive 12 month period.
(9 VAC 5-80-10H)

15. Covanta Alexandria/Arlington, Inc. shall not operate any municipal waste combustor at a 4-hour average steam load level greater than 110 percent of the maximum demonstrated municipal waste combustor unit load which is the maximum 4-hour arithmetic average unit load during four consecutive hours achieved during the most recent dioxin/furan test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 9 VAC 5-40-8040, except:

a. During the annual dioxin/furan performance test and the 2 weeks preceding the

annual dioxin/furan performance test, the municipal waste combustor unit load limit is not applicable.

b. The municipal waste combustor unit load limit may be waived in accordance with permission granted by the board, for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(9 VAC 5-40-8120A)

16. The 4-hour average temperature, measured at each particulate matter control device inlet, shall not exceed 17°C (30.6°F) above the maximum demonstrated particulate matter control device temperature which is the highest 4-hour arithmetic average flue gas temperature measured at the particulate matter control device inlet during the most recent dioxin/furan test demonstrating compliance with the applicable limit for municipal waste combustor organics specified under 9 VAC 5-40-8040, except:

a. During the annual dioxin/furan performance test and the 2 weeks preceding the annual dioxin/furan performance test, the particulate matter control device temperature limitations are not applicable.

b. The particulate matter control device temperature limits may be waived, in accordance with permission granted by the board, for the purpose of evaluating system performance, testing new technology or control technologies, diagnostic testing, or related activities for the purpose of improving facility performance or advancing the state-of-the-art for controlling facility emissions.

(9 VAC 5-40-8120B)

PART V- Operator Training and Certification:

17. Each chief facility operator and shift supervisor shall obtain and maintain one of the following:

a. A current provisional operator training certification from the American Society of Mechanical Engineers (QRO-1-1994) in conjunction with licensing requirements of the Board for Waste Management Facility Operators as required by 18 VAC 155 Chapter 20 (18 VAC 155-20-10 et seq.); or

b. A license from the Board for Waste Management Facility Operators as required by 18 VAC 155 Chapter 20 (18 VAC 18-20-10 et seq.).

(9 VAC 5-40-8130A)

18. Each chief facility operator and shift supervisor shall have:

a. (Satisfactorily) Completed full certification exam with the American Society of Mechanical Engineers (QRO-1-1994) certification program in conjunction with

the Board for Waste Management Facility Operators as required by 18 VAC 155 Chapter 20 (18 VAC 155-20-10 et seq.); or

b. Obtained a license from the Board for Waste Management Facility Operators as required by 18 VAC 155 Chapter 20 (18 VAC 155-20-10 et seq.).

(9 VAC 5-40-8130B)

19. Covanta Alexandria/Arlington, Inc. shall not allow the municipal waste combustor facility to be operated at any time unless a person is on duty who is responsible for the proper operation of the facility and has a license from the Board for Waste Management Facility Operators in the correct classification.
(9 VAC 5-40-8130C)

20. Covanta Alexandria/Arlington, Inc. shall not allow the municipal waste combustor facility to be operated at any time unless one of the following persons is on duty and at Covanta Alexandria/Arlington, Inc.: A fully certified chief facility operator, a provisionally certified chief facility operator who is scheduled to take the full certification exam according to the schedule specified in 9 VAC 5-40-8110 B 1, a fully certified shift supervisor, or a provisionally certified shift supervisor who is scheduled to take the full certification exam according to the schedule specified in 9 VAC 5-40-8110 B 1. If one of the persons listed in condition #19 of this permit must leave Covanta Alexandria/Arlington, Inc. during their operating shift, a provisionally certified control room operator who is onsite at Covanta Alexandria/Arlington, Inc. may fulfill the requirements of this condition
(9VAC 5-40-8130D).

21. All chief facility operators, shift supervisors, and control room operators must (satisfactorily) complete the board-approved municipal waste combustor operator training course.
(9 VAC 5-40-8130E)

22. Covanta Alexandria/Arlington, Inc. shall develop and update on a yearly basis a site-specific operating manual that shall, at a minimum, address the elements of municipal waste combustor unit operation specified in sections a. through k. of this condition.

a. A summary of the applicable standards under this permit;

b. A description of basic combustion theory applicable to a municipal waste combustor unit;

c. Procedures for receiving, handling, and feeding municipal solid waste;

d. Municipal waste combustor unit startup, shutdown, and malfunction procedures;

e. Procedures for maintaining proper combustion air supply levels;

f. Procedures for operating the municipal waste combustor unit within the standards established under this permit;

g. Procedures for responding to periodic upset or off-specification conditions;

h. Procedures for minimizing particulate matter carryover;

i. Procedures for handling ash;

j. Procedures for monitoring municipal waste combustor unit emissions; and

k. Reporting and recordkeeping procedures.

The operations manual shall include a copy of this permit.

(9 VAC 5-40-8130F & 9 VAC 5-170-160)

23. The site-specific operations manual required in condition #22 shall include a copy of the current, approved Standby Emission Reduction Plan required under 9 VAC 5-70-50 for reducing nonattainment emissions during an Air Pollution Episode.
(9 VAC 5-170-160)

24. Covanta Alexandria/Arlington, Inc. shall establish a training program to review the operating manual according to the schedule specified in sections a and b of this condition with each person who has responsibilities affecting the operation of the facility including, but not limited to, chief facility operators, shift supervisors, control room operators, ash handlers, maintenance personnel, and crane/load handlers.

a. Each person shall undergo initial training no later than the date prior to the day the person assumes responsibilities affecting municipal waste combustor unit operation; or August 1, 2000, whichever is later.

b. Each person shall repeat the initial training annually, within 12 months of the initial training required by section a. of this condition.

(9 VAC 5-40-8130G)

25. The operating manual required by condition #22 shall be kept in a readily accessible location for all persons required to undergo training under condition #24. The operating manual and records of training shall be available for inspection by the board upon request.
(9 VAC 5-40-8130H)

26. All training and licensing shall be in accordance with Section 54.1-1212 of the Code of Virginia.
(9 VAC 5-40-8130I)

PART VI - Test Methods and Procedures (9 VAC 5-40-8140).

27. The provisions of 9 VAC 5-40-30 (Emission testing) apply except as provided in conditions #28 through #113.
(9 VAC 5-40-8140A)

Particulate Matter

28. The procedures and test methods specified in conditions #29 through #38 of this section shall be used to determine compliance with the emission limits for particulate matter and opacity under 9 VAC 5-40-7970 and 9 VAC 5-40-8060.
(9VAC 5-40-8140B)

29. Reference Method 1 shall be used to select sampling site and number of traverse points. (9VAC 5-40-8140B.1)

30. Reference Method 3, 3A, or 3B, as applicable, shall be used for gas analysis.
(9VAC 5-40-8140B.2)

31. Reference Method 5 shall be used for determining compliance with the particulate matter emission limit contained in condition #9. The minimum sample volume shall be 1.7 cubic meters. The probe and filter holder heating systems in the sample train shall be set to provide a gas temperature no greater than 160 + 14°C. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Reference Method 5 run (9VAC 5-40-8140B.3)

32. Covanta Alexandria/Arlington, Inc. may request that compliance with the particulate matter emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150 B 6.
(9VAC 5-40-8140B.4)

33. As specified in 9 VAC 5-40-30, all performance tests shall consist of three test runs. The average of the particulate matter emission concentrations from the three test runs, one of which shall include normal sootblowing operations, shall be used to determine compliance.
(9VAC 5-40-8140B.5)

Opacity

34. In accordance with conditions #35 and #38, Reference Method 9 shall be used for determining compliance with the opacity limit except as provided in 9 VAC 5-40-20.
(9VAC 5-40-8140B.6)

35. Covanta Alexandria/Arlington, Inc. shall conduct an initial performance test for particulate matter emissions and opacity as required in 9 VAC 5-40-8100.
(Note: This performance standard has been achieved.)
(9VAC 5-40-8140B.7)

36. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous opacity monitoring system for measuring opacity and shall follow the methods and procedures specified in sections a. through d. of this condition.

    a. The output of the continuous opacity monitoring system shall be recorded on a 6-minute average basis.

    b. The continuous opacity monitoring system shall be installed, evaluated, and operated in accordance with 9 VAC 5-40-40 and 9 VAC 5-40-41.

    c. The continuous opacity monitoring system shall conform to Performance Specification 1 in appendix B of 40 CFR 60.

    d. The initial performance evaluation shall be completed as specified in 9 VAC 5-40-8100.

    (9 VAC 5-40-8140B.8)

37. Following the date that the initial performance test for particulate matter is completed or is required to be completed in 9 VAC 5-40-8100 Covanta Alexandria/Arlington, Inc. shall conduct a performance test for particulate matter on an annual basis (no more than 12 calendar months following the previous performance test).
    (9VAC 5-40-8140B.9)

38. Following the date that the initial performance test for opacity is completed or is required to be completed in 9 VAC 5-40-8100 Covanta Alexandria/Arlington, Inc. shall conduct a performance test for opacity on an annual basis (no more than 12 calendar months following the previous performance test) using the test method specified in permit condition #34.
    (9VAC 5-40-8140B.10)

Cadmium and Lead

39. The procedures and test methods specified in conditions #40 and #58 of this permit shall be used to determine compliance with the emission limits for cadmium, lead, and mercury under 9 VAC 5-40-7990, 9 VAC 5-40-8000, and 9 VAC 5-40-8010.
    (9VAC 5-40-8140C)

40. The procedures and test methods specified in conditions #41 through #47 of this permit shall be used to determine compliance with the emission limits for cadmium and lead under 9 VAC 5-40-7990 and 9 VAC 5-40-8000.
    (9VAC 5-40-8140C.1)

41. Reference Method 1 shall be used for determining the location and number of sampling points.
    (9VAC 5-40-8140C.1a)

42. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
(9VAC 5-40-8140C.1b)

43. Reference Method 29 shall be used for determining compliance with the cadmium and lead emission limits.
(9VAC 5-40-8140C.1c)

44. An oxygen or carbon dioxide measurement shall be obtained simultaneously with each Reference Method 29 test run for cadmium and lead required under permit condition # 43.
(9VAC 5-40-8140C.1d)

45. Covanta Alexandria/Arlington, Inc. may request that compliance with the cadmium or lead emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150 B 6.
(9VAC 5-40-8140C.1e)

46. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the cadmium or lead emission concentrations from three test runs or more shall be used to determine compliance.
(9VAC 5-40-8140C.1f)

47. Following the date of the initial performance test or the date on which the initial performance test is required to be completed in 9 VAC 5-40-8100, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for compliance with the emission limits for cadmium and lead on an annual basis (no more than 12 calendar months following the previous performance test).
(9VAC 5-40-8140C.1g)

Mercury

48. The procedures and test methods specified in conditions #49 through #58 shall be used to determine compliance with the mercury emission limit under 9 VAC 5-40-8010.
(9VAC 5-40-8140C.2)

49. Reference Method 1 shall be used for determining the location and number of sampling points.
(9VAC 5-40-8140C.2a)

50. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
(9VAC 5-40-8140C.2b)

51. Reference Method 29 shall be used to determine the mercury emission concentration.

The minimum sample volume when using Reference Method 29 for mercury shall be 1.7 cubic meters.
(9VAC 5-40-8140C.2c)

52. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Reference Method 29 test run for mercury required under permit condition #51.
(9VAC 5-40-8140C.2d)

53. The percent reduction in the potential mercury emissions ($\%P_{Hg}$) is computed using the following equation:

$$(\%PHg) = \left(\frac{Ei - Eo}{Ei}\right) x\,100$$

where:

$\%P_{Hg}$ = percent reduction of the potential mercury emissions achieved.

E_i = potential mercury emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis).

E_o = controlled mercury emission concentration measured at the mercury control device outlet, corrected to 7 percent oxygen (dry basis).

(9VAC 5-40-8140C.2e)

54. All performance tests shall consist of a minimum of three test runs conducted under representative full load operating conditions. The average of the mercury emission concentrations or percent reductions from three test runs or more is used to determine compliance.
(9VAC 5-40-8140C.2f)

55. Covanta Alexandria/Arlington, Inc. may request that compliance with the mercury emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150 B 6.
(9VAC 5-40-8140C.2g)

56. Covanta Alexandria/Arlington, Inc. shall conduct an initial performance test for mercury emissions as required in 9 VAC 5-40-8100.
(Note: This performance standard has been achieved.)
(9VAC 5-40-8140C.2h)

57. Following the date that the initial performance test for mercury is completed or is required to be completed in 9 VAC 5-40-8100, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for mercury emissions on a annual basis (no more than 12

calendar months from the previous performance test).
(9VAC 5-40-8140C.2i)

58. Covanta Alexandria/Arlington, Inc. where activated carbon injection is used to comply with the mercury emission limit shall follow the procedures specified in 9 VAC 5-40-8140 J for measuring and calculating carbon usage. (9VAC 5-40-8140C.2j)

Sulfur Dioxide

59. The procedures and test methods specified in conditions #59 through #73 shall be used for determining compliance with the sulfur dioxide emission limit under 9 VAC 5-40-8020.
(9VAC 5-40-8140D)

60. Reference Method 19, section 4.3, shall be used to calculate the daily geometric average sulfur dioxide emission concentration.
(9VAC 5-40-8140D.1)

61. Reference Method 19, section 5.4, shall be used to determine the daily geometric average percent reduction in the potential sulfur dioxide emission concentration.
(9VAC 5-40-8140D.2)

62. Covanta Alexandria/Arlington, Inc. may request that compliance with the sulfur dioxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150 B 6.
(9VAC 5-40-8140D.3)

63. Covanta Alexandria/Arlington, Inc. shall conduct an initial performance test for sulfur dioxide emissions as required in 9 VAC 5-40-8100. Compliance with the sulfur dioxide emission limit (concentration or percent reduction) shall be determined by using the continuous emission monitoring system specified in permit condition #64 to measure sulfur dioxide and calculating a 24-hour daily geometric average emission concentration or a 24-hour daily geometric average percent reduction using Reference Method 19, sections 4.3 and 5.4, as applicable.
(Note: This performance standard has been achieved.)
(9VAC 5-40-8140D.4)

64. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring sulfur dioxide emissions discharged to the atmosphere and record the output of the system.
(9VAC 5-40-8140D.5)

65. Following the date that the initial performance test for sulfur dioxide is completed or is required to be completed in 9 VAC 5-40-8100, compliance with the sulfur dioxide emission limit shall be determined based on the 24-hour daily geometric average of the

hourly arithmetic average emission concentrations using continuous emission monitoring system outlet data if compliance is based on an emission concentration, or continuous emission monitoring system inlet and outlet data if compliance is based on a percent reduction.
(9VAC 5-40-8140D.6)

66. At a minimum, valid continuous monitoring system hourly averages shall be obtained as specified in sections a. and b. of this condition, for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that Covanta Alexandria/Arlington, Inc. is combusting municipal solid waste.

    a. At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

    b. Each sulfur dioxide 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

    (9VAC 5-40-8140D.7)

67. The 1-hour arithmetic averages required under permit condition #65 shall be expressed in parts per million corrected to 7 percent oxygen (dry basis) and used to calculate the 24-hour daily geometric average emission concentrations and daily geometric average emission percent reductions. The 1-hour arithmetic averages shall be calculated using the data points required in 9 VA 5-40-41 B 3.
(9VAC 5-40-8140D.8)

68. All valid continuous emission monitoring system data shall be used in calculating average emission concentrations and percent reductions even if the minimum continuous emission monitoring system data requirements of permit condition #66 are not met.
(9VAC 5-40-8140D.9)

69. The procedures in 9 VAC 5-40-40 and 9 VAC 5-40-41 shall be followed for installation, evaluation, and operation of the continuous emission monitoring system.
(9VAC 5-40-8140D.10)

70. The initial performance evaluation shall be completed as specified in 9 VAC 5-40-8100. (Note: This performance standard has been achieved.)
(9VAC 5-40-8140D.11)

71. The continuous emission monitoring system shall be operated according to Performance Specification 2 in appendix B of 40 CFR 60.

    a. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 in appendix B of 40 CFR 60, sulfur dioxide and oxygen (or carbon dioxide) data shall be collected concurrently

(or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in permit conditions #71a(1) and #71a(2), below.

(1) For sulfur dioxide, Reference Method 6, 6A, or 6C shall be used.

(2) For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.

b. The span value of the continuous emissions monitoring system at the inlet to the sulfur dioxide control device shall be 125 percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit. The span value of the continuous emission monitoring system at the outlet of the sulfur dioxide control device shall be 50 percent of the maximum estimated hourly potential sulfur dioxide emissions of the municipal waste combustor unit.

(9VAC 5-40-8140D.12).

72. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 1 in appendix F of 40 CFR 60.
(9VAC 5-40-8140D.13)

73. When sulfur dioxide emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained by using other monitoring systems as approved by the board or Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 75 percent of the hours per day that Covanta Alexandria/Arlington, Inc. is operated and combusting municipal solid waste for 90 percent of the days per calendar quarter that Covanta Alexandria/Arlington, Inc. is operated and combusting municipal solid waste.
(9VAC 5-40-8140D.14)

Hydrogen chloride

74. The procedures and test methods specified in conditions #75 through #81 shall be used for determining compliance with the hydrogen chloride emission limit under 9 VAC 5-40-8030.
(9VAC 5-40-8140E)

75. Reference Method 26 or 26A, as applicable, shall be used to determine the hydrogen chloride emission concentration. The minimum sampling time for Reference Method 26 shall be 1 hour.
(9VAC 5-40-8140E.1)

76. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Reference Method 26 test run for hydrogen chloride required by permit condition #75.

(9VAC 5-40-8140E.2)

77. The percent reduction in potential hydrogen chloride emissions (% P_{HCl}) is computed using the following equation:

$$(\%PHCl)=\left(\frac{Ei - Eo}{Ei}\right) x\,100$$

where:

$\%P_{HCl}$ = percent reduction of the potential hydrogen chloride emissions achieved.

E_i = potential hydrogen chloride emission concentration measured at the control device inlet, corrected to 7 percent oxygen (dry basis).

E_O = controlled hydrogen chloride emission concentration measured at the control device outlet, corrected to 7 percent oxygen (dry basis).

(9VAC 5-40-8140E.3)

78. Covanta Alexandria/Arlington, Inc. may request that compliance with the hydrogen chloride emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide

levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150 B 6.
(9VAC 5-40-8140E.4)

79. As specified in 9 VAC 5-40-30, all performance tests shall consist of three test runs. The average of the hydrogen chloride emission concentrations or percent reductions from the three test runs is used to determine compliance.
(9VAC 5-40-8140E.5)

80. Covanta Alexandria/Arlington, Inc. shall conduct an initial performance test for hydrogen chloride as required in 9 VAC 5-40-8100.
(Note: This performance standard has been achieved.)
(9VAC 5-40-8140E.6)

81. Following the date that the initial performance test for hydrogen chloride is completed or is required to be completed in 9 VAC 5-40-8100, Covanta Alexandria/Arlington, Inc. shall conduct a performance test for hydrogen chloride emissions on an annual basis (no more than 12 calendar months following the previous performance test).
(9VAC 5-40-8140E.7)

Dioxin/Furan

82. The procedures and test methods specified in conditions #83 through #91 shall be used to determine compliance with the limits for dioxin/furan emissions under 9 VAC 5-40-8040.
(9VAC 5-40-8140F)

83. Reference Method 1 shall be used for determining the location and number of sampling points.
(9VAC 5-40-8140F.1)

84. Reference Method 3, 3A, or 3B, as applicable, shall be used for flue gas analysis.
(9VAC 5-40-8140F.2)

85. Reference Method 23 shall be used for determining the dioxin/furan emission concentration.

    a. The minimum sample time shall be 4 hours per test run.

    b. An oxygen (or carbon dioxide) measurement shall be obtained simultaneously with each Reference Method 23 test run for dioxins/furans.

    (9VAC 5-40-8140F.3)

86. Covanta Alexandria/Arlington, Inc. shall conduct an initial performance test for dioxin/furan emissions in accordance with permit condition #85, as required in 9 VAC 5-40-8100.
(Note: This performance standard has been achieved.)
(9VAC 5-40-8140F.4)

87. Following the date that the initial performance test for dioxins/furans is completed or is required to be completed in 9 VAC 5-40-8100, Covanta Alexandria/Arlington, Inc. shall conduct performance tests for dioxin/furan emissions in accordance with permit condition # 85, according to one of the schedules in sections a. and b. of this permit condition.

    a. For affected facilities, performance tests shall be conducted on an annual basis (no more than 12 calendar months following the previous performance test).

    b. Where all performance tests over a 2-year period indicate that dioxin/furan emissions are less than or equal to 15 nanograms per dry standard cubic meter (total mass) for all affected facilities located within a municipal waste combustor plant, the owner of the municipal waste combustor plant may elect to conduct annual performance tests for one affected facility (i.e., unit) per year at the municipal waste combustor plant. At a minimum, a performance test for dioxin/furan emissions shall be conducted annually (no more than 12 months following the previous performance test) for one affected facility at the municipal

waste combustor plant. Each year a different affected facility at the municipal waste combustor plant shall be tested, and the affected facilities at the plant shall be tested in sequence (e.g., unit 1, unit 2, unit 3, as applicable). If each annual performance test continues to indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass), the owner may continue conducting a performance test on only one affected facility per year. If any annual performance test indicates a dioxin/furan emission level greater than 15 nanograms per dry standard cubic meter (total mass), performance tests thereafter shall be conducted annually on all affected facilities at the plant until and unless all annual performance tests for all affected facilities at the plant over a 2-year period indicate a dioxin/furan emission level less than or equal to 15 nanograms per dry standard cubic meter (total mass).

(9VAC 5-40-8140F.5)

88. If Covanta Alexandria/Arlington, Inc. elects to follow the performance testing schedule specified in permit conditions #87a and #87b above, Covanta Alexandria/Arlington, Inc. shall follow the procedures specified in 9 VAC 5-40-8160 D 4 for reporting the selection of this schedule.
(9VAC 5-40-8140F.6)

89. [Reserved]

90. Covanta Alexandria/Arlington, Inc. may request that compliance with the dioxin/furan emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150 B 6.
(9VAC 5-40-8140F.8)

91. As specified in 9 VAC 5-40-30, all performance tests shall consist of three test runs. The average of the dioxin/furan emission concentrations from the three test runs is used to determine compliance.
(9VAC 5-40-8140F.9)

Nitrogen Oxides

92. The procedures and test methods specified in conditions #93 through #104 shall be used to determine compliance with the nitrogen oxides emission limit for affected facilities under 9 VAC 5-40-8050.
(9VAC 5-40-8140G)

93. Reference Method 19, section 4.1, shall be used for determining the daily arithmetic average nitrogen oxides emission concentration.
(9VAC 5-40-8140G.1)

94. Covanta Alexandria/Arlington, Inc. may request that compliance with the nitrogen oxides

emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in 9 VAC 5-40-8150 B 6.
(9VAC 5-40-8140G.2)

95. Covanta Alexandria/Arlington, Inc. is subject to the nitrogen oxides limit under 9 VAC 5-40-8050 and shall conduct an initial performance test for nitrogen oxides as required in 9 VAC 5-40-8100. Compliance with the nitrogen oxides emission limit shall be determined by using the continuous emission monitoring system specified in permit condition #96 for measuring nitrogen oxides and calculating a 24-hour daily arithmetic average emission concentration using Reference Method 19, section 4.1.
(Note: This performance standard has been achieved.)
(9VAC 5-40-8140G.3)

96. Covanta Alexandria/Arlington, Inc. is subject to the nitrogen oxides emission limit under 9 VAC 5-40-8050 and shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring nitrogen oxides discharged to the atmosphere, and record the output of the system.
(9VAC 5-40-8140G.4)

97. Following the date that the initial performance test for nitrogen oxides is completed or is required to be completed in 9 VAC 5-40-8100, compliance with the emission limit for nitrogen oxides required under 9 VAC 5-40-8050 shall be determined based on the 24-hour daily arithmetic average of the hourly emission concentrations using continuous emission monitoring system outlet data.
(9VAC 5-40-8140G.5)

98. At a minimum, valid continuous emission monitoring system hourly averages shall be obtained as specified in sections a. and b. of this condition for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that Covanta Alexandria/Arlington, Inc. is combusting municipal solid waste.

a. At least 2 data points per hour shall be used to calculate each 1-hour arithmetic average.

b. Each nitrogen oxides 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(9VAC 5-40-8140G.6)

99. The 1-hour arithmetic averages required by permit condition #97 shall be expressed in parts per million by volume (dry basis) and used to calculate the 24-hour daily arithmetic average concentrations. The 1-hour arithmetic averages shall be calculated using the data points required in 9 VAC 5-40-41 B 3.
(9VAC 5-40-8140G.7)

100. All valid continuous emission monitoring system data must be used in calculating emission averages even if the minimum continuous emission monitoring system data requirements of permit condition #98 are not met.
(9VAC 5-40-8140G.8)

101. The procedures in 9 VAC 5-40-40 and 9 VAC 5-40-41 shall be followed for installation, evaluation, and operation of the continuous emission monitoring system. The initial performance evaluation shall be completed as specified in 9 VAC 5-40-8100.
(9VAC 5-40-8140G.9)

102. Covanta Alexandria/Arlington, Inc. shall operate the continuous emission monitoring system according to Performance Specification 2 in appendix B of 40 CFR 60 and shall follow the procedures and methods as follows:

a. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 2 of appendix B of 40 CFR 60, nitrogen oxides and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in this permit condition #102a(1) and #102a(2).

(1) For nitrogen oxides, Reference Method 7, 7A, 7C, 7D, or 7E shall be used.

(2) For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.

b. The span value of the continuous emission monitoring system shall be 125 percent of the maximum estimated hourly potential nitrogen oxide emissions of the municipal waste combustor unit.

(9VAC 5-40-8140G.10)

103. Quarterly accuracy determinations and daily calibration drift tests shall be performed in accordance with procedure 1 in appendix F of 40 CFR 60.
(9VAC 5-40-8140G.11)

104. When nitrogen oxides continuous emissions data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved by the board or Reference Method 19 to provide, as necessary, valid emissions data for a minimum of 75 percent of the hours per day for 90 percent of the days per calendar quarter the unit is operated and combusting municipal solid waste.
(9VAC 5-40-8140G.12)

Fugitive Ash

105. The procedures specified in conditions #106 through #109 shall be used for determining compliance with the fugitive ash emission limit under 9 VAC 5-40-8070.
(9VAC 5-40-8140H)

106. Reference Method 22 shall be used for determining compliance with the fugitive ash emission limit under 9 VAC 5-40-8070. The minimum observation time shall be a series of three 1-hour observations. The observation period shall include times when the facility is transferring ash from the municipal waste combustor unit to the area where ash is stored or loaded into containers or trucks.
(9VAC 5-40-8140H.1)

107. The average duration of visible emissions per hour shall be calculated from the three 1-hour observations. The average shall be used to determine compliance with 9 VAC 5-40-8070.
(9VAC 5-40-8140H.2)

108. Covanta Alexandria/Arlington, Inc. shall conduct an initial performance test for fugitive ash emissions as required in 9 VAC 5-40-8100.
(Note: This performance standard has been achieved.)
(9VAC 5-40-8140H.3)

109. Following the date that the initial performance test for fugitive ash emissions is completed or is required to be completed in 9 VAC 5-40-8100 for an affected facility, the owner shall conduct a performance test for fugitive ash emissions on an annual basis (no more than 12 calendar months following the previous performance test).
(9VAC 5-40-8140H.4)

Carbon Mass

110. Since activated carbon injection is used at Covanta Alexandria/Arlington, Inc. to comply with the mercury emission limit under 9 VAC 5-40-8010, or the dioxin/furan emission limits under 9 VAC 5-40-8040, or the dioxin/furan emission level specified in 9 VAC 5-40-8140 F 5 b, Covanta Alexandria/Arlington, Inc. shall follow the procedures specified in conditions #111 through #113.
(9VAC 5-40-8140J)

111. During the performance tests for dioxins/furans and mercury, as applicable, the owner shall estimate an average carbon mass feed rate based on carbon injection system operating parameters such as the gravimetric feed rate, hopper volume, hopper refill frequency, or other parameters appropriate to the feed system being employed, as specified in section a. of this permit condition.

    a. An average carbon mass feed rate in kilograms per hour or pounds per hour shall be estimated during the initial performance test for mercury emissions and

each subsequent performance test for mercury emissions. The average carbon mass feed rate shall be based on a 6-hour average or the total sampling time during the most recent annual performance test for mercury.

(9VAC 5-40-8140J.1)

112. During operation of Covanta Alexandria/Arlington, Inc., the carbon injection system operating parameter(s) that are the primary indicator(s) of the carbon mass feed rate (e.g., gravimetric feeder setting) must equal or exceed the level(s) documented during the performance tests specified under permit conditions #111a.
(9VAC 5-40-8140J.2)

113. Covanta Alexandria/Arlington, Inc. shall estimate the total carbon usage of the plant (kilograms or pounds) for each calendar quarter by two independent methods, according to the procedures in sections a. and b. of this permit condition.

a. The weight of carbon delivered to the plant.

b. Estimate the average carbon mass feed rate in kilograms per hour or pounds per hour for each hour of operation for each affected facility based on the parameters specified under permit condition #111, and sum the results for all affected facilities at the plant for the total number of hours of operation during the calendar quarter.

(9VAC 5-40-8140J.3)

PART VII - Monitoring

114. The permittee will monitor the differential pressure drop across each fabric filter on an ongoing basis. The continuous opacity monitor will be used as an indicator of proper operation of the fabric filter.
(9 VAC 5-40-50 H)

115. The provisions of 9 VAC 5-40-40 (Monitoring) apply except as provided in permit conditions #115A through #135.
(9 VAC 5-40-8150A)

115A. [Reserved]

115B. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems for opacity. For facilities combusting municipal-type solid waste, the span value for a continuous monitoring system for measuring opacity shall be between 0 and 35 percent.
(40 CFR 60.48b and 9 VAC 5-40-8060)

115C. [Reserved]

116. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous emission monitoring system and record the output of the system for measuring the oxygen or carbon dioxide content of the flue gas at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides emissions are monitored and shall comply with the test procedures and test methods specified in conditions #117 through #123.
(9VAC 5-40-8150B)

117. The span value of the oxygen (or carbon dioxide) monitor shall be 25 percent oxygen (or carbon dioxide).
(9VAC 5-40-8150B.1)

118. All continuous emission monitors for oxygen or carbon dioxide shall be installed, evaluated, and operated in accordance with 9 VAC 5-40-40 and 9 VAC 5-40-41.
(9VAC 5-40-8150B.2)

119. The initial performance evaluation shall be completed as specified in 9 VAC 5-40-8100.
(9VAC 5-40-8150B.3)

120. All continuous emission monitors for oxygen and carbon dioxide shall conform to Performance Specification 3 in appendix B of 40 CFR 60 except for section 2.3 (relative accuracy requirement).
(9VAC 5-40-8150B.4)

121. The quality assurance procedures of appendix F of 40 CFR 60 except for section 5.1.1 (relative accuracy test audit) shall apply to the monitor.
(9VAC 5-40-8150B.5)

122. If carbon dioxide is selected for use in diluent corrections, the relationship between oxygen and carbon dioxide levels shall be established during the initial performance test according to the procedures and methods specified in sections a. through d. of this permit condition. This relationship may be reestablished during performance compliance tests.

a. The fuel factor equation in Reference Method 3B shall be used to determine the relationship between oxygen and carbon dioxide at a sampling location. Reference method 3, 3A, or 3B, as applicable, shall be used to determine the oxygen concentration at the same location as the carbon dioxide monitor.

b. Samples shall be taken for at least 30 minutes in each hour.

c. Each sample shall represent a 1-hour average.

d. A minimum of three runs shall be performed.

(9VAC 5-40-8150B.6)

123. The relationship between carbon dioxide and oxygen concentrations that is established

in accordance with permit condition #122 shall be submitted to the board as part of the initial performance test report and, if applicable, as part of the annual test report if the relationship is reestablished during the annual performance test.
(9VAC 5-40-8150B.7)

124. The procedures specified in conditions #125 through #136 shall be used for determining compliance with the operating requirements under 9 VAC 5-40-8120.
(9VAC 5-40-8150C)

125. Compliance with the carbon monoxide emission limits in 9 VAC 5-40-7980 shall be determined using a 4-hour block arithmetic average.
(9VAC 5-40-8150C.1)

126. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a continuous emission monitoring system for measuring carbon monoxide at the combustor outlet and record the output of the system and shall follow the procedures and methods specified in sections a. and b. of this permit condition.

a. The continuous emission monitoring system shall be operated according to Performance Specification 4A in appendix B of 40 CFR 60.

b. During each relative accuracy test run of the continuous emission monitoring system required by Performance Specification 4A in appendix B of 40 CFR 60, carbon monoxide and oxygen (or carbon dioxide) data shall be collected concurrently (or within a 30- to 60-minute period) by both the continuous emission monitors and the test methods specified in this permit condition #126b(1) and #126b(2).

(1) For carbon monoxide, Reference Method 10, 10A, or 10B shall be used.

(2) For oxygen (or carbon dioxide), Reference Method 3, 3A, or 3B, as applicable, shall be used.

c. The span value of the continuous emission monitoring system shall be 125 percent of the maximum estimated hourly potential carbon monoxide emissions of the municipal waste combustor unit.

(9VAC 5-40-8150C.3)

127. The 4-hour block arithmetic average specified in permit condition #125 of this section shall be calculated from 1-hour arithmetic averages expressed in parts per million by volume corrected to 7 percent oxygen (dry basis). The 1-hour arithmetic averages shall be calculated using the data points generated by the continuous emission monitoring system. At least two data points shall be used to calculate each 1-hour arithmetic average.
(9VAC 5-40-8150C.4)

128. Covanta Alexandria/Arlington, Inc. may request that compliance with the carbon monoxide emission limit be determined using carbon dioxide measurements corrected to an equivalent of 7 percent oxygen. The relationship between oxygen and carbon dioxide levels for Covanta Alexandria/Arlington, Inc. shall be established as specified in permit condition #122.
(9VAC 5-40-8150C.5)

129. The procedures specified in section a. through d. of this condition shall be used to determine compliance with load level requirements under 9 VAC 5-40-8120 A.

a. Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a steam flow meter or a feedwater flow meter; measure steam (or feedwater) flow in megagrams per hour (or kilopounds per hour) on a continuous basis; and record the output of the monitor. Steam (or feedwater) flow shall be calculated in 4-hour block arithmetic averages.

b. The method included in the "American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1 -- 1964 (R1991)" section 4 shall be used for calculating the steam (or feedwater) flow required under section a. of this permit condition. The recommendations in "American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters, 6th edition (1971)," chapter 4 shall be followed for design, construction, installation, calibration, and use of nozzles and orifices except as specified in section c. of this permit condition.

c. Measurement devices such as flow nozzles and orifices are not required to be recalibrated after they are installed.

d. All signal conversion elements associated with steam (or feedwater flow) measurements must be calibrated according to the manufacturer's instructions before each dioxin/furan performance test, and at least once per year.

(9VAC 5-40-8150C.6)

130. To determine compliance with the maximum particulate matter control device temperature requirements under 9 VAC 5-40-8120 B, Covanta Alexandria/Arlington, Inc. shall install, calibrate, maintain, and operate a device for measuring on a continuous basis the temperature of the flue gas stream at the inlet to each particulate matter control device
utilized by Covanta Alexandria/Arlington, Inc. Temperature shall be calculated in 4-hour block arithmetic averages.
(9VAC 5-40-8150C.7)

131. The maximum demonstrated municipal waste combustor unit load shall be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in 9 VAC 5-40-8040 is achieved. The maximum demonstrated municipal waste combustor unit load shall be the highest 4-hour arithmetic average load achieved during four consecutive

hours during the most recent test during which compliance with the dioxin/furan emission limit was achieved.
(9VAC 5-40-8150C.8)

132. For each particulate matter control device employed at Covanta Alexandria/Arlington, Inc., the maximum demonstrated particulate matter control device temperature shall be determined during the initial performance test for dioxins/furans and each subsequent performance test during which compliance with the dioxin/furan emission limit specified in 9 VAC 5-40-8040 is achieved. The maximum demonstrated particulate matter control device temperature shall be the highest 4-hour arithmetic average temperature achieved at the particulate matter control device inlet during four consecutive hours during the most recent test during which compliance with the dioxin/furan limit was achieved.
(9VAC 5-40-8150C.9)

133. At a minimum, valid continuous emission monitoring system hourly averages shall be obtained as specified in sections a. and b. of this condition for 75 percent of the operating hours per day for 90 percent of the operating days per calendar quarter that Covanta Alexandria/Arlington, Inc. is combusting municipal solid waste.

a. At least two data points per hour shall be used to calculate each 1-hour arithmetic average.

b. At a minimum, each carbon monoxide 1-hour arithmetic average shall be corrected to 7 percent oxygen on an hourly basis using the 1-hour arithmetic average of the oxygen (or carbon dioxide) continuous emission monitoring system data.

(9VAC 5-40-8150C.10)

134. All valid continuous emission monitoring system data must be used in calculating the parameters specified under this section even if the minimum data requirements of permit condition #133 are not met. When carbon monoxide continuous emission data are not obtained because of continuous emission monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments, emissions data shall be obtained using other monitoring systems as approved by the board or Reference Method 10 to provide, as necessary, the minimum valid emission data.
(9VAC 5-40-8150C.11)

135. Quarterly accuracy determinations and daily calibration drift tests for the carbon monoxide continuous emission monitoring system shall be performed in accordance with procedure 1 in appendix F of 40 CFR 60.
(9VAC 5-40-8150C.12)

PART VIII - Notification, Recordkeeping and Reporting

136. The provisions of 9 VAC 5-40-50 (Notification, records and reporting) apply except as provided in permit conditions #137 through #149, #152 through #156 and #160 through 169. (9VAC 5-40-8160A)

Records

137. Covanta Alexandria/Arlington, Inc. shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, Northern Virginia Regional Office. These records shall include, but are not limited to the information specified in permit conditions #138 through #151, as applicable, for each affected facility. These records shall be available on-site for inspection by the DEQ for a period of at least 5 years.
(9VAC 5-40-8160B, 9 VAC 5-40-50 and 9 VAC 5-50-50)

138. Covanta Alexandria/Arlington, Inc. shall maintain the calendar date of each record.
(9VAC 5-40-8160B.1)

139. The emission concentrations and parameters measured using continuous monitoring systems as specified under this condition.

a. The measurements specified in a(1) through a(4) of this condition shall be recorded and be available for submittal to the board or review onsite by an inspector.

(1) All 6-minute average opacity levels as specified under 9 VAC 5-40-8140 B.

(2) All 1-hour average sulfur dioxide emission concentrations as specified under 9 VAC 5-40-8140 D.

(3) All 1-hour average nitrogen oxides emission concentrations as specified under 9 VAC 5-40-8140 G.

(4) All 1-hour average carbon monoxide emission concentrations, municipal waste combustor unit load measurements, and particulate matter control device inlet temperatures as specified under 9 VAC 5-40-8150 C.

b. The average concentrations and percent reductions, as applicable, specified in permit conditions #139b(1) through #139b(4) shall be computed and recorded, and shall be available for submittal to the board or review on-site by an inspector.

(1) All 24-hour daily geometric average sulfur dioxide emission concentrations and all 24-hour daily geometric average percent reductions in sulfur dioxide emissions as specified under 9 VAC-5-40-8140D.

(2) All 24-hour daily arithmetic average nitrogen oxides emission concentrations as specified under 9 VAC 5-40-8140 G

(3) All 4-hour block or 24-hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under 9 VAC 5-40-8150 C.

(4) All 4-hour block arithmetic average municipal waste combustor unit load

levels and particulate matter control device inlet temperatures as specified under 9 VAC 5-40-8150 C.

(9VAC 5-40-8160B.2)

140. Identification of the calendar dates when any of the average emission concentrations, percent reductions, or operating parameters recorded under b (1) through b (4) of permit condition #139, or the opacity levels recorded under a (1) of permit condition #139 are above the applicable limits, with reasons for such exceedances and a description of corrective actions taken.
(9VAC 5-40-8160B.3)

141. For affected facilities that apply activated carbon for mercury control, the records specified in sections a. through d. of this condition.

a. The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated as required under 9 VAC 5-40-8140 J 1 a during all annual performance tests for mercury emissions, with supporting calculations. The average carbon mass feed rate shall be based on a 6-hour average or the total sampling time of the most recent annual performance test for mercury.

b. The average carbon mass feed rate (in kilograms per hour or pounds per hour) estimated for each hour of operation as required under 9 VAC 5-40-8140 J 3 b, with supporting calculations. The average carbon mass feed rate shall be based on a 6-hour average or the total sampling time of the most recent annual performance test for mercury.

c. The total carbon usage for each calendar quarter estimated as specified by 9 VAC 5-40-8140 J 3, with supporting calculations.

d. Carbon injection system operating parameter data for the parameter(s) that are the primary indicator(s) of carbon feed rate (e.g., gravimetric feeder).

(9VAC 5-40-8160B.4)

142. Identification of the calendar dates for which the minimum number of hours of any of the data specified in sections a. through e. of this condition have not been obtained including reasons for not obtaining sufficient data and a description of corrective actions taken.

a. Sulfur dioxide emissions data;

b. Nitrogen oxides emissions data;

c. Carbon monoxide emissions data;

d. Municipal waste combustor unit load data; and

e. Particulate matter control device temperature data.

(9VAC 5-40-8160B.5)

143. Identification of each occurrence that sulfur dioxide emissions data, nitrogen oxides emissions data, or operational data (i.e., carbon monoxide emissions, unit load, and particulate matter control device temperature) have been excluded from the calculation of average emission concentrations or parameters, and the reasons for excluding the data. (9VAC 5-40-8160B.6)

144. The results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides (large municipal waste combustors only), and carbon monoxide continuous emission monitoring systems, as required under appendix F of 40 CFR 60, procedure 1.
(9VAC 5-40-8160B.7)

145. The test reports documenting the results of all annual performance tests listed in sections a. and b. of this permit condition shall be recorded along with supporting calculations.

a. The results of all annual performance tests conducted to determine compliance with the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission limits.

b. For all dioxin/furan performance tests recorded under section a. of this permit condition, the maximum demonstrated municipal waste combustor unit load and maximum demonstrated particulate matter control device temperature (for each particulate matter control device).

(9 VAC 5-40-8160B.8)

146. The records specified in sections a. through c. of this condition.

a. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been provisionally certified by the American Society of Mechanical Engineers or an equivalent board-approved certification program as required by 9 VAC 5-40-8130 A including the dates of initial and renewal certifications and documentation of current certification.

b. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have been fully certified by the American Society of Mechanical Engineers or an equivalent board-approved certification program as required by 9 VAC 5-40-8130 B including the dates of initial and renewal certifications and documentation of current certification.

c. Records showing the names of the municipal waste combustor chief facility operator, shift supervisors, and control room operators who have completed the

EPA municipal waste combustor operator training course or a board-approved equivalent course as required by 9 VAC 5-40-8130 E including documentation of training completion.

(9 VAC 5-40-8160B.9)

147. Records showing the names of persons who have completed a review of the operating manual as required by 9 VAC 5-40-8130 G including the date of the initial review and subsequent annual reviews.
(9 VAC 5-40-8160B.10)

148. For affected facilities that apply activated carbon for mercury control, identification of the calendar dates when the average carbon mass feed rates recorded under permit condition #141b were less than either of the hourly carbon feed rates estimated during performance tests for mercury emissions and recorded under permit conditions #141a, respectively, with reasons for such feed rates and a description of corrective actions taken.
(9 VAC 5-40-8160B.11)

149. Since Covanta Alexandria/Arlington, Inc. applies activated carbon for mercury control, identification of the calendar dates when the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate (e.g. gravimetric feed rate) recorded under permit condition #141d are below the level(s) estimated during the performance tests as specified in 9 VAC 5-40-8140 J 1 a and 9 VAC 5-40-8140 J 1 b, with reasons for such occurrences and a description of corrective actions taken.
(9 VAC 5-40-8160B.12)

150. Records showing the amount of No. 2 fuel oil used as auxiliary fuel in each of the municipal waste combustors.
(9 VAC 5-50-50 and 9 VAC 5-80-1700)

151. The continuous emission monitor system records shall be annotated to identify the municipal waste combustor train, dates, light-off and securing times, and average firing rates.
(9 VAC 5-50-50)

151A. [Reserved]

151B. [Reserved]

151C. The permittee shall keep readily accessible records showing the dimension of the storage vessel and an analysis showing the capacity of the storage vessel. The content and format of such records shall be arranged with the Air Compliance Manager, Northern Virginia Regional Office. These records shall be available on-site for inspection by the DEQ for the life of the source.
(9 VAC 5-40-50, 40 CFR 60.110b(c) and 40 CFR 60.11b(a)-(b))

Annual Report

152. Covanta Alexandria/Arlington, Inc. shall submit an annual report including the information specified in permit conditions #153 through #156, as applicable, no later than February 1 of each year following the calendar year in which the data were collected (once the unit is subject to permitting requirements in a federal operating permit, Covanta Alexandria/Arlington, Inc. must submit these reports semiannually). (9 VAC 5-40-8160D)

153. A summary of data collected for all pollutants and parameters regulated under this article, which includes the information specified in sections a. through e. of this permit condition.

a. A list of the particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emission levels achieved during the performance tests recorded under permit condition #145.

b. A list of the highest emission level recorded for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, and particulate matter control device inlet temperature based on the data recorded under permit condition #139b.

c. List the highest opacity level measured, based on the data recorded under permit condition #139a(1).

d. The total number of days that the minimum number of hours of data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, and particulate matter control device temperature data were not obtained based on the data recorded under permit condition #142.

e. The total number of hours that data for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load, and particulate matter control device temperature were excluded from the calculation of average emission concentrations or parameters based on the data recorded under permit condition #143.

(9 VAC 5-40-8160D.1)

154. The summary of data reported under permit condition #153 shall also provide the types of data specified in permit condition #153 for the calendar year preceding the year being reported, in order to provide the board with a summary of the performance of Covanta Alexandria/Arlington, Inc. over a 2-year period.
(9 VAC 5-40-8160D.2)

155. The summary of data including the information specified in permit conditions #153 and #154 shall highlight any emission or parameter levels that did not achieve the emission or parameter limits specified under this article.
(9 VAC 5-40-8160D.3)

156. A notification of intent to begin the reduced dioxin/furan performance testing schedule specified in 9 VAC 5-40-8140 F 5 b during the following calendar year.
(9 VAC 5-40-8160D.4)

157. Annual emissions and a certification of compliance with the facility annual permit mass emission limitations utilizing a combination of steam production data, CEMS data, and results of stack testing shall be included in Covanta Alexandria/Arlington, Inc.'s annual report.
(9 VAC 5-50-50)

158. Covanta Alexandria/Arlington, Inc. shall demonstrate compliance in its annual report with all the lb/MMBtu and lb/hr mass emission limitations, or for HCl, SO_2 and mercury the percent removal requirements utilizing a combination of steam production data, CEMS data, and results of stack testing.
(9 VAC 5-50-50)

159. Covanta Alexandria/Arlington, Inc. shall document in its annual report that actual carbon monoxide (CO) emissions have not increased more than 99 tons per year from an average of 1998 & 1999 facility wide actual CO emissions of 46.5 tpy, calculated on a cumulative basis.
(9 VAC 5-50-50)

Semiannual Report

160. Covanta Alexandria/Arlington, Inc. shall submit a semiannual report that includes the information specified in permit conditions #160A through #165 for any recorded pollutant or parameter that does not comply with the pollutant or parameter limit specified under this article, according to the schedule specified under permit condition #166.
(9VAC 5-40-8160E)

160A. [Reserved]

161. The semiannual report shall include information recorded under permit condition #140 for sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, and opacity.
(9VAC 5-40-8160E.1)

162. For each date recorded as required by permit condition #140 and reported as required by permit condition #161, the semiannual report shall include the sulfur dioxide, nitrogen oxides, carbon monoxide, municipal waste combustor unit load level, particulate matter control device inlet temperature, or opacity data, as applicable, recorded under permit conditions #140a(1) and #140b, as applicable.
(9VAC 5-40-8160E.2)

163. If the test reports recorded under permit condition #145 document any particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash

emission levels that were above the applicable pollutant limits, the semiannual report shall include a copy of the test report documenting the emission levels and the corrective actions taken.
(9VAC 5-40-8160E.3)

164. The semiannual report shall include the information recorded under permit condition #149 for the carbon injection system operating parameter(s) that are the primary indicator(s) of carbon mass feed rate.
(9VAC 5-40-8160E.4)

165. For each operating date reported as required by permit condition #164 the semiannual report shall include the carbon feed rate data recorded under permit condition #141b.
(9VAC 5-40-8160E.5)

166. Semiannual reports required by permit conditions #160 through #166 shall be submitted according to the schedule specified in sections a. and b. of this permit condition.

a. If the data reported in accordance with permit conditions #161 through #165 were collected during the first calendar half, then the report shall be submitted by August 1 following the first calendar half.

b. If the data reported in accordance with permit conditions #161 through #165 were collected during the second calendar half, then the report shall be submitted by February 1 following the second calendar half.

(9VAC 5-40-8160E.6)

167. All reports specified under permit conditions #152 through #165 shall be submitted as a paper copy, postmarked on or before the submittal dates specified under these permit conditions, and maintained onsite as a paper copy for a period of 5 years.
(9VAC 5-40-8160G)

168. All records specified under permit conditions #137 through #149 shall be maintained onsite in either paper copy or computer-readable format, unless an alternative format is approved by the board.
(9VAC 5-40-8160H)

169. If Covanta Alexandria/Arlington, Inc. would prefer to select a different annual or semiannual date for submitting the periodic reports required by permit conditions #152 through #166, then the dates may be changed by mutual agreement between the owner and the board.
(9VAC 5-40-8160I)

Initial Performance Test Report

170. Covanta Alexandria/Arlington, Inc. shall submit the information specified in sections a. through f. of this permit condition in the initial performance test report.

a. The initial performance test data as recorded under permit condition #139b for the initial performance test for sulfur dioxide, nitrogen oxides, carbon monoxide, MWC combustor unit load level, and particulate matter control device inlet temperature.

b. The test report documenting the initial performance test recorded under permit condition #145 for particulate matter, opacity, cadmium, lead, mercury, dioxins/furans, hydrogen chloride, and fugitive ash emissions.

c. The performance evaluation of the continuous emission monitoring system using the applicable performance specifications in appendix B of 40 CFR Part 60.

d. The maximum demonstrated MWC unit load and maximum demonstrated particulate matter control device inlet temperatures established during the initial dioxin/furan performance test as recorded in permit condition #145.

e. For affected facilities that apply activated carbon injection for mercury control, the owner shall submit the average carbon mass feed rate recorded under permit condition #141a.

(Note: This initial performance test report has been submitted and the requirements of this permit condition have been achieved.)
(9VAC 5-40-8160J)

PART IX - Compliance

171. The provisions of 9 VAC 5-40-20 (Compliance) apply except as provided in permit condition #172 through #174.
(9VAC-5-40-8100)

172. The provisions for startup, shutdown, and malfunction in this permit condition apply. Test methods and procedures for determining compliance shall be performed as specified in 9 VAC 5-40-8140. The standards under this permit apply at all times except during periods of startup, shutdown, or malfunction. Duration of startup, shutdown, or malfunction periods are limited to 3 hours per occurrence.

a. The startup period commences when the municipal waste combustor unit begins the continuous burning of municipal solid waste and does not include any warmup period when the municipal waste combustor unit is combusting fossil fuel or other nonmunicipal solid waste fuel, and no municipal solid waste is being fed to the combustor.

b. Continuous burning is the continuous, semicontinuous, or batch feeding of municipal solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of municipal solid waste solely to provide thermal protection of the grate or hearth during the startup period when municipal solid waste is not being fed to the grate is not considered to be continuous burning.

(9VAC 5-40-8100B)

173. Municipal waste combustor unit capacity shall be calculated based on 24 hours of operation at the maximum charging rate. The maximum charging rate shall be calculated based on the maximum design heat input capacity of the unit and a heating value of 10,500 kilojoules per kilogram (4,500 Btu/lb) for combustors firing municipal solid waste that is not refuse-derived fuel.
(9 VAC 5-40-8100C.1 and 9 VAC 5-40-8100C.1a)

174. The provisions of 40 CFR 62.14109, Subpart FFF reporting, and recordkeeping, and compliance and performance testing, (63 FR 63191, November 12, 1998) apply to the extent they do not conflict with this article.
(9VAC 5-40-8100F)

PART X - Compliance Schedules.

175. The compliance schedule provisions of 40 CFR 62.14108 (63 FR 63191, November 12, 1998) apply to the extent they do not conflict with 9 VAC 5-40 Article 46. Consistent with the compliance schedule set forth in Table 4 of Subpart FFF, final compliance with the provisions of this permit must be achieved by 12/19/00.
(Note: This performance standard has been achieved.)
(9VAC 5-40-8110A and 40 CFR Part 62.14100 et seq.)

176. Covanta Alexandria/Arlington, Inc. shall comply with the municipal waste combustor operator training and certification requirements under 9 VAC 5-40-8130 according to the schedule specified in sections a. and b. of this permit condition.

a. Covanta Alexandria/Arlington, Inc. shall comply with the municipal waste combustor operator training and certification requirements specified in 9 VAC 5-40-8130 A through D by August 1, 2000.

b. Covanta Alexandria/Arlington, Inc. shall comply with the requirements specified in 9 VAC 5-40-8130 E through H no later than August 1, 2000.

(1) The requirement specified in 9 VAC 5-40-8130 E does not apply to chief facility operators, shift supervisors, and control room operators who have obtained full certification from the American Society of Mechanical Engineers on or before the effective date of this article.

(2) Covanta Alexandria/Arlington, Inc. may request that the board waive the requirement specified in 9 VAC 5-40-8130 E for chief facility operators, shift supervisors, and control room operators who have obtained provisional certification from the American Society of Mechanical Engineers on or before the effective date of this article.

(3) The initial training requirements specified in 9 VAC 5-40-8130 G 1 shall be completed no later than the date specified in this permit condition #176b(3a) and 176b(3) whichever is later.

(a) August 1, 2000; or

(b) The date prior to the day when the person assumes responsibilities affecting municipal waste combustor unit operation.

(Note: This performance standard has been achieved.)
(9 VAC 5-40-8110B)

PART XI - GENERAL CONDITIONS

177. **Testing/Monitoring Ports** - The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is free from cyclonic flow. Test ports shall be provided when requested in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).
(9 VAC 5-50-30 F)

178. This is not a permit under the Resource Conservation and Recovery Act (RCRA). Questions on the applicability of RCRA can be directed to the Virginia Department of Environmental Quality - Waste Division.
(9 VAC 5-170-160)

179. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

c. To inspect at reasonable times any facility, equipment, or process subject to the

terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency. (9 VAC 5-170-130)

180. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Air Compliance Manager, Northern Virginia Regional Office of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;

b. The expected length of time that the air pollution control equipment will be out of service;

c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;

d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B)

181. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Air Compliance Manager, Northern Virginia Regional Office of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone, telegraph, or other electronic methods. Excess emissions for NO_x, SO_2 and CO for more than one hour shall be based on the averaging periods specified in Condition #9 and the emission limits specified in Condition #10. Such notification shall be made as soon as practicable but not later than four daytime business hours of the malfunction.

The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of the occurrence. Owners who are subject to the requirements of 9 VAC 5-40-50C and 9 VAC 5-50-50C, are not required to provide the written statement prescribed in this permit condition for facilities which are subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. 9 VAC 5-40-50C states that:

"Each owner required to install a continuous monitoring system shall submit a written report of excess emissions (as defined in the applicable emission standard) to the board for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information:

a. The magnitude of excess emissions computed in accordance with 9 VAC 5-40-41B6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measure adopted;

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

d. When no excess emissions have occurred or the continuous monitoring system have not been inoperative, repaired or adjusted, such information shall be stated in the report."

When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Air Compliance Manager, Northern Virginia Regional Office in writing.
(9 VAC 5-20-180 C and 9 VAC 5-40-50C)

182. **Facility or Control Equipment Malfunction - Hazardous Air Pollutant Processes** - The processes listed below shall, upon request of the Department, shut down immediately if its emissions increase in any amount because of a bypass, malfunction, shutdown or failure of the process or its associated air pollution control equipment. The processes shall not return to operation until it and the associated air pollution control equipment are able to operate in the proper manner.

a. Three municipal waste combustors (MWC's) each nominally rated at 121.8 million Btu per hour based on a higher heating value (HHV) of 4,500 Btu/lb for MSW.

(9 VAC 5-20-180 F 3)

183. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I)

184. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

a. Knowingly makes material misstatements in the application for this permit or any amendments to it;

b. Fails to comply with the conditions of this permit;

c. Fails to comply with any emission standards applicable to the equipment listed in condition #2;

d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard;

e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;

f. Fails to modify or operate this facility in accordance with the application for this permit or any amendments to it; or

g. Allows the permit to become invalid.

(9 VAC 5-80-10 K)

185. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Air Compliance Manager, Northern Virginia Regional Office of the change of ownership within 30 days of the transfer.
(9 VAC 5-80-10 O)

186. **Registration/Update** - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.
(9 VAC 5-170-60 and 9 VAC 5-20-160)

187. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-170-160)

188. **Disclaimer**- The standards of performance for Municipal Waste Combustors (MWC), Rule 4-46, 40 CFR 60 Subpart Cb – Emission Guidelines and 40 CFR 62 Subpart FFF referenced in this permit are current as of the effective date of this permit. If the applicable MWC rules are revised by EPA or the Virginia DEQ, the most recent regulations shall be used in determining compliance.
(9 VAC 5-170-80 and 9 VAC 5-40-7950)

Part XII - State Only Requirements

1. Standard for Odor: The provisions of Article 2 (9 VAC 5-40-130 et seq.) of 9 VAC 5 Chapter 40 (Emission Standards for Odor, Rule 4-2) apply. To minimize odors at the facility, the tipping floor is fully enclosed. A negative pressure shall be maintained on the tipping floor and air from within the building will be used as combustion air. (9 VAC 5-40-8080.)

2. Standard for Toxic Pollutants: The provisions of Article 3 (9 VAC 5-40-160 et seq.) of 9 VAC 5 Chapter 40 (Emission Standards for Toxic Pollutants, Rule 4-3) apply. (9 VAC 5-40-8090.)

3. Emissions from the operation of EACH municipal waste combustor shall not exceed the limitations specified below:

	lb/MMBtu	tons/yr
Antimony	3.3×10^{-4}	0.175
Arsenic	7.6×10^{-5}	0.04
Hydrogen Bromide	6.0×10^{-2}	31.97
Hydrogen Fluoride	1.4×10^{-2}	7.45

(9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280 and 9 VAC 5-50-180)

4. Emissions from the operation of the facility shall not exceed the limitations specified below:

	tons/yr
Antimony	0.53
Arsenic	0.12
Hydrogen Bromide	95.91
Hydrogen Fluoride	22.35

(9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280 and 9 VAC 5-50-180)

5. Covanta Alexandria/Arlington, Inc. shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Air Compliance Manager, Northern Virginia Regional Office. These records shall include, but are not limited to:

   a. Stack test results demonstrating compliance with hydrogen fluoride, antimony, arsenic and hydrogen bromide emissions limits.

   These records shall be available on-site for inspection by the DEQ. (9 VAC 5-50-50)

PART XIII - DOCUMENT LIST

1. Permit application from Ogden Martin Systems of Alexandria/Arlington, dated March 28, 1984 (Revised June 1,1984 and July 25, 1984).

2. Letter to Howard Sharfner from Mr. John C. Doherty, dated April 9, 1984, Subject: Approval of Draft TRC Modeling Plan dated March 28, 1984.

3. Letter to Mr. Dennis Carroll from Mr. John M. Daniel, Jr., dated May 7, 1984, Subject: BACT determination and PSD Permit Application Requirements.

4. Modeling Plan for the Air Quality Analysis for the Alexandria Waste-to Energy Facility; TRC Environmental Consultants, Inc., May 8, 1984.

5. TRC Project Note No. 1: Determination of the Modeling and Screening Areas for the Alexandria Waste-to-Energy Facility, dated June 6, 1984.

6. Letter to Mr. Mitchell Wormbrand from Mr. Limon E. Fortner, dated June 26, 1984, Subject: Approval of Screening Model Analysis and Instructions for PSD Modeling.

7. TRC, Inc. Report on Air Quality Impact Analysis, dated July 25, 1984.

8. Ogden Martin Systems of Alexandria/Arlington Solid Waste Management (RCRA) permit.

9. VDAPC-VII memorandum, Amendment to the Alexandria/Arlington Waste-to-Energy (WTE) Facility, dated May 25, 1988 (engineering analysis).

10. State Air Pollution Control Board, Acting Executive Director letter to OMS, transmittal of amended permit increasing annual throughput limit, June 19, 1986 (the current permit).

11. OMSA letter to SAPCB, PSD Permit Modification for the Alexandria/Arlington Resource Recovery Facility, December 29, 1987 (meeting request).

12. Ogden Projects, Inc., Environmental Test Report, dated December 30, 1987 and revised January 8, 1988.

13. OMSA letter to State Air Pollution Control Board, Region VII, Alexandria/Arlington Resource Recovery Facility PSD Permit No. 71895, dated February 3, 1988 (request for consent agreement).

14. OMS letter to State Air Pollution Control Board, same subject, dated February 11, 1988 (transmittal of information).

15. Consent Agreement and Order, State Air Pollution Control Board with OMSA, dated February 18, 1988 (authority to operate at NO_X emission levels above permit limits

pending Board action.

16. State Air Pollution Control Board, Assistant Executive Director, Operations memorandum Meeting on March 3 on Alexandria Incinerator, dated March 7, 1988.

17. Ogden Projects, Incorporated, Environmental Test Report #144B (dioxin test with lime), dated March 9, 1988.

18. OMS letter to State Air Pollution Control Board, Region VII, Alexandria/Arlington Waste-to-Energy Facility, March 11, 1988 (transmittal of air quality analysis report).

19. RTP Environmental Associates letter to State Air Pollution Control Board , Division of Computer Services, transmittal of computer modeling output, dated March 18, 1988.

20. OMS letter to State Air Pollution Control Board, Region VII, Alexandria/Arlington Waste-to-Energy Facility, received March 18, 1988 (transmittal of NO_X BACT Review)

21. State Air Pollution Control Board, Division of Computer Services memorandum, Meeting of March 22, 1988 with Source Representatives, dated March 25, 1988 (review of modeling report).

22. OMS letter to State Air Pollution Control Board, Region VII, Alexandria/Arlington Waste-to-Energy Facility; Agency Review Draft – PSD Permit No. 71895, dated April 5, 1988 (formal request for permit amendment to increase NO_X limit).

23. State Air Pollution Control Board, Division of Computer Services, memorandum, Report on Modeling for Proposed Change to PSD Permit for the Alexandria/Arlington Resource Recovery Facility (Ogden Martin Systems, Inc.), dated April 11, 1988.

24. State Air Pollution Control Board, Division of Computer Services, letter to RTP Environmental Associates, Modeling Protocol for Additional Analyses – Alexandria RRF, dated April 22, 1988.

25. State Air Pollution Control Board, Executive Director letter to OMS, request for detailed analysis and comparisons, Fairfax versus Alexandria/Arlington incinerators, dated May 2, 1988.

26. OMS letter to State Air Pollution Control Board, Region VII, Alexandria Air Quality Modeling, PSD Permit No. 71895, dated May 3, 1988 (transmittal of report of additional modeling).

27. OMS letter to SAPCB, Region VII, PSD Permit No. 71895 Lime Injection System Status Report, dated May 11, 1988 (modification completion report).

28. OMS letter to State Air Pollution Control Board, Executive Director, Alexandria/Arlington Resource Recovery Facility PSD Permit No. 71895, dated May 12, 1988 (response to May 2, 1988 request for analysis and comparisons, Fairfax facility versus Alexandria

facility).

29. State Air Pollution Control Board, Division of Computer Services, Report on Supplemental Modeling for Proposed Change to PSD Permit for the Alexandria/Arlington Resource Recovery Facility (Ogden Martin Systems, Inc.), dated May 13, 1988.

30. Exxon R&E Company letter to State Air Pollution Control Board, Division of Source Evaluation, Thermal DeNOX for MSW Incinerator, dated May 13, 1988.

31. State Air Pollution Control Board, Assistant Executive Director, Operations letter to EPA Region III, notification of scheduled public hearing for PSD permit changes and transmittal of relative documents, dated May 23, 1988 (copies also provided to numerous carbon copy addressees).

32. State Air Pollution Control Board, Division of Source Evaluation letter to OMS, Ogden Martin Systems of Alexandria/Arlington, Inc., Request for Permit Amendment, dated May 24, 1988 (notifies source of public hearing, requests their participation).

33. State Air Pollution Control Board, Assistant Executive Director, Operations letter to EPA, Region III, transmittal of staff engineering analysis, dated May 17, 1988 (same carbon copy addressees as with the May 23, 1988 PSD notification letter).

34. State Air Pollution Control Board, Division of Source Evaluation memorandum, Report of Modeling of Selected Pollutants; Ogden Martin Systems of Alexandria/Arlington (OMSA), dated May 31, 1988 (ambient air impact of non-criteria pollutants).

35. EPA Region III letter to State Air Pollution Control Board, Assistant Executive Director, Operations, Alexandria/Arlington, Inc. PSD Permit Modification, dated June 13, 1988 (provides EPA comments and suggestions concerning content of draft proposed permit).

36. Transcript of Alexandria/Arlington Waste-to-Energy Plant Public Hearing, City of Alexandria, Virginia, (conducted) June 20, 1988.

37. State Air Pollution Control Board, Region VII memorandum, Public Hearing Report – Amendment to Permit for Ogden Martin Systems of Alexandria/Arlington, Inc.; Registration No. 71895, dated July 1, 1988 (summarized proceedings, reports comments from attending citizens, transmits attendance record and written comments submitted to the Board).

38. Shenandoah National Park letter to State Air Pollution Control Board, Assistant Executive Director, Operations, comments on the draft proposed permit, dated July 1, 1988.

39. OMS letter to State Air Pollution Control Board, Division of Source Evaluation, Alexandria/Arlington Resource Recovery Facility PSD Permit No. 71895, dated July 8,

1988 (expression of concerns regarding intra-Staff recommendations for further changes to draft permit).

40. Virginia Department of Air Pollution Control letter to Superintendent, Shenandoah National Park, staff response to comments provided by the Park Service in their July 1, 1988 letter dated July 13, 1988.

41. OMS letter to Virginia Department of Air Pollution Control, Division of Source Evaluation, Alexandria/Arlington Resource Recovery Facility PSD Permit No. 71895, dated July 14, 1988 (transmittal of requested emission rates for non-criteria pollutants and comments concerning proposed reductions in SO_2 and HC_1 emission limits).

42. OMS letter to Virginia Department of Air Pollution Control, Alexandria/Arlington Resource Recovery Facility PSD Permit No. 71895, dated July 22, 1988 (budgetary cost estimates of retrofit control system options).

43. OMS letter to Virginia Department of Air Pollution Control, dated May 19, 1989 requesting use of the data acquisition system (DAS) at the facility in lieu of data loggers and strip chart recorders. (Granted in PSD permit amendment of July 7, 1989).

44. OMS letters to Region VII, Virginia Department of Air Pollution Control, dated November 1, and December 26, 1990 requesting increase in annual throughput limitation from 302,000 tons to 320,000 tons for the facility. (Granted in PSD permit amendment of February 15, 1991).

45. OMS letter to Executive Director, to Virginia Department of Air Pollution Control, dated May 29, 1991 concerning compliance with environmental guidelines.

46. OMS letter to Region VII, Virginia Department of Air Pollution Control, dated August 15, 1991 concerning proposed permit modifications.

47. OMS letter to Region VII, Virginia Department of Air Pollution Control, dated October 18, 1991 concerning implementation of MWC emission guidelines.

48. OMS letter to Region VII, Virginia Department of Air Pollution Control, dated November 1, 1991 concerning stream flow and summary of stack tests at the facility.

49. Joint Arlington County/City of Alexandria letter to Region VII, Virginia Department of Air Pollution Control, dated December 18, 1991 supporting the OMS request for permit amendments on increased throughput and that the demand was unanticipated.

50. Region VII, letter to OMS, dated January 9, 1992 requesting additional information on the proposed changes to the PSD permit for the facility.

51. OMS letter to Region VII, Department of Air Pollution Control, dated January 31, 1992 providing additional information on proposed changes to the PSD permit for the facility.

52. Region VII Memoranda to AED-Regional Operations, Subject: PSD Permit Amendment, Ogden Martin Systems of Alexandria/Arlington, Inc., Registration No. 71895, dated December 24, 1991 and February 18, 1992 the PSD permit for the facility.

53. OMS letter to Region VII, Department of Air Pollution Control, dated September 11, 1992 requesting amendments to the PSD permit for the facility.

54. Region VII Memorandum to AED-Regional Operations, dated October 20, 1992 providing proposed amendments to the PSD permit for the facility to include substitution of annual steam production for annual throughput, reductions in annual allowable emissions of NO_X, SO_2 and HCl, and other changes to the permit conditions based upon 40 CFR 60, Subpart Ca requirements.

55. OMS letter to the Virginia Department of Environmental Quality, Northern Virginia Regional Office, dated May 2, 2000 requesting amendments to the PSD permit for the facility.

56. OMS facsimile transmission to the Virginia Department of Environmental Quality, Northern Virginia Regional Office, dated August 22, 2000, providing additional information needed to process the amendment to the PSD permit.

57. Permit application from Covanta Alexandria/Arlington, dated August 13, 2007 (Revised February 4, 2009).

58. Covanta Alexandria/Arlington letter to the Virginia Department of Environmental Quality, Northern Regional Office, dated September 10, 2010 requesting amendments to the PSD permit for the facility and providing proposed Material Review Process.

SOURCE TESTING REPORT FORMAT

Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Tester; name, address and report date

Certification

1. Signed by team leader / certified observer (include certification date)
2.* Signed by reviewer

Introduction

1. Test purpose
2. Test location, type of process
3. Test dates
4.* Pollutants tested
5. Test methods used
6. Observers' names (industry and agency)
7. Any other important background information

Summary of Results

1. Pollutant emission results / visible emissions summary
2. Input during test vs. rated capacity
3. Allowable emissions
4.* Description of collected samples, to include audits when applicable
5. Discussion of errors, both real and apparent

Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Process and control equipment data

* Sampling and Analysis Procedures

1. Sampling port location and dimensioned cross section
2. Sampling point description
3. Sampling train description
4. Brief description of sampling procedures with discussion of deviations from standard methods
5. Brief description of analytical procedures with discussion of deviation from standard methods

Appendix

1.* Process data and emission results example calculations
2. Raw field data
3.* Laboratory reports
4. Raw production data
5.* Calibration procedures and results
6. Project participants and titles
7. Related correspondence
8. Standard procedures

___* Not applicable to visible emission evaluations.

APPENDIX A

Material Review Process

APPENDIX C
September 27, 2010 Minor NSR Permit

NRO-288-10

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
NORTHERN REGIONAL OFFICE
13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3821
www.deq.virginia.gov

Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

September 27, 2010

Mr. Bryan Donnelly
Facility Manager
Covanta Alexandria/Arlington
5301 Eisenhower Avenue
Alexandria, Virginia 22304

Registration No.: 71895

Dear Mr. Donnelly:

Attached is a minor amendment to your new source review permit dated March 16, 2010 to modify and operate a municipal solid waste incineration facility in accordance with the provisions of the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution (Regulations). Permit changes are reflected in Conditions 6, page 4; Condition 12, page 7; Condition 14.I, page 10; and Appendix A. This amended permit supersedes your permit dated March 16, 2010.

This permit contains legally enforceable conditions. Failure to comply may result in appropriate enforcement. Please read all permit conditions carefully.

In the course of evaluating the application and arriving at a final decision to approve the project, the Department of Environmental Quality (DEQ) deemed the application complete on September 22, 2010.

This permit approval to modify and operate shall not relieve Covanta Alexandria/Arlington of the responsibility to comply with all other local, state, and federal permit regulations.

The Board's Regulations as contained in Title 9 of the Virginia Administrative Code (VAC) 5-170-200 provide that you may request a formal hearing from this case decision by filing a petition with the Board within 30 days after this case decision notice was mailed or delivered to you. 9 VAC 5-170-200 also provides that you may request direct consideration of the decision by the Board if the Director of the DEQ made the decision. Please consult the relevant regulations for additional requirements for such requests.

Event	Date	Initials
Code: mNSR	9/27/10	EA
Scanned		
QC		

SCANNED

As provided by Rule 2A:2 of the Supreme Court of Virginia, you have thirty days from the date you actually received this permit or the date on which it was mailed to you, whichever occurred first, within which to initiate an appeal of this decision by filing a Notice of Appeal with:

David K. Paylor, Director
Department of Environmental Quality
P. O. Box 1105
Richmond, VA 23218

If this permit was delivered to you by mail, three days are added to the thirty-day period in which to file an appeal. Please refer to Part Two A of the Rules of the Supreme Court of Virginia for information on the required content of the Notice of Appeal and for additional requirements governing appeals from decisions of administrative agencies.

If you have any questions concerning this permit, please contact the regional office at 703.583.3858.

Sincerely,

Terry H. Darton
Regional Air Permit Manager

TAF/THD/EHA/10-288-mnsr

Attachment: Permit
Appendix A

cc: Director, OAPP (electronic file submission)
Manager, Air Compliance
File

NRO-288-10

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
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Douglas W. Domenech
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE
This permit includes designated equipment subject to New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia Regulations for the Control and Abatement of Air Pollution,

Covanta Alexandria/Arlington, Incorporated
40 Lane Road, CN 2615
Fairfield, NJ 07007
Registration No.: 71895

is authorized to modify and operate

A waste-to-energy facility containing three 121.8 MMBtu per hour municipal waste combustors

located at

5301 Eisenhower Avenue
Alexandria, Virginia

in accordance with the Conditions of this permit.

Approved on: September 27, 2010

Thomas A. Faha,
Regional Director

Permit consists of 16 pages.
Permit Conditions 1 to 27.
Appendix A

INTRODUCTION

This permit approval is based on the permit application dated September 10, 2010, with additional information dated September 22, 2010, and permit application dated August 13, 2007, as amended by letter dated February 4, 2009 and supplemental information dated March 3, 2009 and March 13, 2009. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-80-1110 (definitions) and 9 VAC 5-10-20 of the State Air Pollution Control Board's (Board) Regulations for the Control and Abatement of Air Pollution (Regulations). The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the Department of Environmental Quality (DEQ) or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

1. **Equipment List** – Previously permitted equipment at this facility prior to the date of this permit consists of

   - Fabric filters/baghouse;
   - Lime slurry injection system (semi-dry scrubber);
   - Ammonia injection system (Selective Non-Catalytic Reduction);
   - One underground storage tank for fuel oil with a total capacity of 20,000 gallons;
   - One lime storage silo with rated capacity of 2548 ft^3/hr;
   - One Dolomitic lime silo with rated capacity of 973 ft^3/hr
   - One carbon storage silo with a rated capacity of 2010 ft^3/hr.
   - Three municipal waste combustors (MWC) each nominally rated at 121.8 MMBtu per hour based on a higher heating value (HHV) of 4,500 Btu/lb of municipal solid waste (MSW);
   - Three municipal waste combustor trains, for this permit a municipal waste combustor train is defined as the feed hopper, feed chute, charging equipment, stoker/grate unit, furnace

section, second pass, generating section, superheater, economizer, induced draft fan and flue;

- Two nominal 12.8 megawatt turbine/electric generators;
- Municipal waste handling and storage facilities; and
- Activated carbon injection system.

Exempted equipment at this facility prior to the date of this permit consists of:

- Ventilation system above the residue handling area.

Specifications included in the permit under this subdivision are for informational purposes only and do not form enforceable terms or conditions of the permit unless the specifications are needed to form the basis for one or more of the other terms or conditions in the permit. (9 VAC 80-1180 D 3)

2. **Emission Controls – MWC** - Particulate matter emissions from the municipal waste combustors shall be controlled by fabric filters. Each fabric filter shall be provided with adequate access for inspection and shall be in operation when the municipal waste combustors are operating.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

3. **Emission Controls – Silos** - Particulate matter emissions from the carbon silo, lime silo, and dolomitic lime silo shall be controlled by fabric filters. The fabric filters shall be provided with adequate access for inspection.
(9 VAC 5-80-1180 and 9 VAC 5-50-90)

MONITORING

4. **Monitoring Devices** - The permittee shall install, calibrate, maintain, and operate:

   a. A continuous emission monitoring system (CEMS) for measuring and recording the oxygen or carbon dioxide content of the flue gas at each location where carbon monoxide, sulfur dioxide, or nitrogen oxides emissions are monitored. The CEMS shall comply with the test procedures and test methods specified in 9 VAC 5-40-8150 B.1 thru B.7.

   b. Continuous emission monitoring systems for measuring nitrogen oxides (NOx) and sulfur dioxide (SO_2) discharged to the atmosphere, record the output of the system, and shall follow the procedures and methods specified in 9 VAC 5-80-8140.

   c. Continuous opacity monitoring systems (COMS) for measuring opacity at each stack where flue gas is vented to the atmosphere and shall follow the methods and procedures specified in 9 VAC 5-40-8140.B.

   d. A continuous emission monitoring system for measuring carbon monoxide at the

combustor outlet and record the output of the system and shall follow the procedures and methods specified in 9 VAC 5-80-8150 C.3.a through 9 VAC 5-80-8150 C.3.c

(9 VAC 5-80-1180, 9 VAC 5-40-8140, and 9 VAC 5-40-8150)

5. **Monitoring Devices** - The fabric filters shall be equipped with a device to continuously measure differential pressure drop across the baghouse. Each monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. Each monitoring device shall be provided with adequate access for inspection and shall be in operation when the fabric filter is operating.
(9 VAC 5-80-1180 and 9 VAC 5-40-50 H)

OPERATING LIMITATIONS

6. **Approved Fuel: Municipal Solid Waste (MSW) –**

   a. Acceptable municipal solid waste includes household waste, commercial/retail waste, institutional waste, and other waste with emission characteristics similar to the acceptable wastes as determined by the permittee and approved by the Regional Air Permit Manager of the DEQ's Northern Regional Office (NRO), or a combination thereof as defined in this condition.

   b. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities.

   c. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, non-manufacturing activities at industrial facilities, and other similar establishments or facilities. All commercial/retail waste shall be mixed with other approved fuels prior to charging to the combustor in order to prevent discreet loads from being charged to a boiler.

   d. Institutional waste includes material discarded by schools, non-medical waste discarded by hospitals, material discarded by non-manufacturing activities at prisons and government facilities, and material discarded by other similar establishments or facilities.

   e. Municipal solid waste does not include hazardous waste, as defined by federal and state waste regulations.

   f. In addition, municipal solid waste shall not include industrial process or manufacturing waste, used oil, sewage sludge, wood pallets, construction, renovation, and demolition wastes, medical waste, motor vehicles (including motor vehicle parts or vehicle fluff) unless approved via the approved Material Review Process (MRP).

   g. The permittee shall monitor the waste delivered to the facility to ensure that only MSW as defined herein is being processed by the facility.

h. This definition of MSW may in the future be expanded to include additional waste types not identified in this condition. To facilitate any revision, the permittee shall submit requests in writing to the Regional Air Permit Manager of the DEQ's NRO. Information on waste composition and emissions characterizations shall be included with any submittal. The request and supporting information will be reviewed and evaluated to determine new source review applicability. The permit will be revised in accordance with the procedures established in the appropriate permitting regulations in the Regulations for the Control and Abatement of Air Pollution.

i. Any waste not classified as hazardous waste, and not covered by the definition of MSW above, shall be reviewed in accordance with the approved MRP (see Appendix A).

(9 VAC 5-80-1180)

7. **Steam Production** - The annual steam production for the facility shall not exceed 1,170,400 tons, on the basis of an average value of 3.34 pounds of steam produced per pound of municipal solid waste (MSW) processed, calculated monthly as the sum of each consecutive twelve month period.
(9 VAC 5-80-1180)

8. **Monthly Steam Production Calculation** - Monthly steam production shall be calculated using the following equation:

Tons of Steam Produced = (Total monthly pounds of MSW combusted** x 3.34 lbs steam/lb of MSW) ÷ 2000

**MSW combusted shall be calculated monthly using the following formula:

MSW combusted = Starting pit inventory + MSW Received – MSW Rejected – Ending pit inventory.

(9 VAC 5-80-1180)

9. **Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, CAA shall operate the three municipal waste combustors in compliance with the applicable requirements of 40 CFR 60 Subpart Cb and 40 CFR 61 Subpart C.
(9 VAC 5-50-400, 9 VAC 5-50-410, 9 VAC 5-60-60, and 9 VAC 5-60-70)

EMISSION LIMITS

10. **Unit Emission Limits** – Subsequent to the issuance of this permit, emissions from the operation of each municipal waste combustor shall not exceed the limitations specified below:

	lb/MMBtu	lbs/hr	tons/yr
Particulate Matter	0.07		12

Particulate Matter 10 (PM_{10})	0.07		12
Sulfur Dioxide	0.14	16.6	53
Volatile Organic Compounds	0.006		3.0
Nitrogen Oxides (as NO_2)	0.55		177
Carbon Monoxide	0.56*	68.5*	48.5**
Municipal Waste Combustor Metals (measured as particulate matter & made up of the following:)	6.47×10^{-3}		3.42
Cadmium	2.7×10^{-4}		0.14
Lead	4.4×10^{-3}		2.32
Mercury	1.8×10^{-3}		0.96
Municipal Waste Combustor Acid Gases (measured as the sum of SO_2 and HCl)	0.48	58.3	102
Hydrogen Chloride	0.34		49
Municipal Waste Combustor Organics (measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans)	1.26×10^{-7}		6.7×10^{-5}
Total Dioxins and Furans	5.05×10^{-8}		2.7×10^{-5}
Beryllium	4.9×10^{-7}	6.0×10^{-5}	2.63×10^{-4}
Sulfuric Acid Mist (H_2SO_4)	2.9×10^{-3}		1.54

* Maximum short-term carbon monoxide emission rate.

** Based on an average annual carbon monoxide emission rate of 0.096 lb/MMBtu, calculated monthly as the average of each consecutive twelve month period. Annual emissions shall be calculated monthly as the sum of each consecutive twelve month period unless specified otherwise.
(9 VAC 5-80-1180, 9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280, and 9 VAC 5-60-320)

11. **Facility Emission Limits** – Subsequent to the issuance of this permit, total emissions from the operation of the municipal waste combustor plant shall not exceed the limitations specified below, calculated monthly as the sum of each consecutive twelve month period:

	tons/yr
Particulate Matter	35.6
Particulate Matter 10 (PM_{10})	35.6

Sulfur Dioxide	159
Volatile Organic Compounds	9.1
Nitrogen Oxides (as NO_2)	530
Carbon Monoxide	145.5**
Municipal Waste Combustor Metals (measured as particulate matter & made up of the following:)	10.27
Cadmium	0.43
Lead	6.96
Mercury	2.88
Municipal Waste Combustor Acid Gases (measured as the sum of SO_2 and HCl)	305
Hydrogen Chloride	146
Municipal Waste Combustor Organics Total Dioxins and Furans	8.1×10^{-5}
Beryllium	7.89×10^{-4}
Sulfuric Acid Mist (H_2SO_4)	4.62

** Based on an average annual carbon monoxide emission rate of 0.096 lb/MMBtu, calculated monthly as the average of each consecutive twelve month period.

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits.
(9 VAC 5-80-1180, 9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280 and 9 VAC 5-60-320)

COMPLIANCE DETERMINATION

12. **Stack Tests** – Within six months of the issuance of this permit, and annually thereafter, the permittee shall conduct performance tests for sulfuric acid mist and particulate matter ($PM_{2.5}$ filterable and $PM_{2.5}$ condensable) from the MWC stacks using EPA methods 1-5, 8, OTM 027, and OTM 028, or other methods as approved by the DEQ. Sulfuric acid mist stack testing shall be conducted to demonstrate compliance with the emission limits contained in this permit.

    a. Emissions testing of each pollutant shall consist of three one-hour test runs (or other length of time as required by the applicable test method). The average of the three runs shall be reported as the short-term emission rate for the facility.

    b. Testing shall be conducted with the MWC operating at eighty percent or more of its maximum rated capacity.

c. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30.

d. The details of the tests are to be arranged with the Regional Air Compliance Manager of the DEQ's NRO at the address listed in Condition 13. The permittee shall submit two copies, one paper copy and one on removable electronic media, of the test protocol to the Regional Air Compliance Manager of the DEQ's NRO at least thirty days prior to testing to ensure adequate time for DEQ approval. If the test protocol is received by the DEQ with less than thirty days for review and acceptance, DEQ approval may not be issued in a timely manner to allow for testing to take place according to the permittee's schedule.

e. Should conditions occur which would require rescheduling the testing, the permittee shall notify the Regional Air Compliance Manager of the DEQ's NRO (at the address listed in Condition 13) in writing, within seven days of the scheduled test date or as soon as the rescheduling is deemed necessary.

f. Two copies, one paper copy and one on removable electronic media, of the test results shall be submitted to the Regional Air Compliance Manager of the DEQ's NRO (at the address listed in Condition 13) within forty-five days after test completion and shall conform to the test report format enclosed with this permit.

(9 VAC 5-80-1200 and 9 VAC 5-50-30 G)

RECORDS

13. All correspondence concerning this permit shall be submitted to the following address -

Regional Air Compliance/Regional Air Permit Manager
Department of Environmental Quality
Northern Regional Office
13901 Crown Court
Woodbridge, VA 22193

(9 VAC 5-50-50)

14. **On Site Records** - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO at the address referenced in the Condition 13. These records shall include, but are not limited to:

a. All scale house receipts documenting incoming MSW deliveries and outgoing MSW that has been rejected.

b. A log of daily pit inventory estimations for each bay (Bays 1 – 5).

c. Annual steam production using the calculation method in Condition 8 to verify compliance with the ton/yr limitation in Condition 7, calculated monthly as the sum of each consecutive twelve-month period. Compliance for the consecutive twelve-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding eleven months.

d. The emission concentrations and parameters measured using continuous monitoring systems as specified in subsections i and ii below:

i. The following measurements specified in i(1) through i(4) of this subpart shall be recorded and be available for submittal to the board or review onsite by an inspector.

(1) All six-minute average opacity levels as specified under 9 VAC 5-40-8140 B.

(2) All one-hour average sulfur dioxide emission concentrations as specified under 9 VAC 5-40-8140 D.

(3) All one-hour average nitrogen oxides emission concentrations as specified under 9 VAC 5-40-8140 G.

(4) All one-hour average carbon monoxide emission concentrations, municipal waste combustor unit load measurements, and particulate matter control device inlet temperatures as specified under 9 VAC 5-40-8150 C.

ii. The average concentrations and percent reductions, as applicable, specified in subsection ii(1) through ii(4) below shall be computed and recorded, and shall be available for submittal to the board or review on-site by an inspector.

(1) All twenty-four hour daily geometric average sulfur dioxide emission concentrations and all twenty-four hour daily geometric average percent reductions in sulfur dioxide emissions as specified in 9 VAC-5-40-8140D.

(2) All twenty-four hour daily arithmetic average nitrogen oxides emission concentrations as specified under 9 VAC 5-40-8140 G.

(3) All four-hour block or twenty-four hour daily arithmetic average carbon monoxide emission concentrations, as applicable, as specified under 9 VAC 5-40-8150 C.

(4) All four-hour block arithmetic average municipal waste combustor unit load levels and particulate matter control device inlet temperatures as specified under 9 VAC 5-40-8150 C.

e. Identification of the calendar dates when any of the average emission concentrations, percent reductions, or operating parameters recorded under ii(1) through ii(4) of subsection a. above, or the opacity levels recorded under i(1) of subsection a. above, are above the applicable limits, with reasons for such exceedance and a description of corrective actions taken.

f. Identification of the calendar dates for which the minimum number of hours of any of the

data specified in sections i. through v. of this subpart have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken.

i. Sulfur dioxide emissions data;

ii. Nitrogen oxides emissions data;

iii. Carbon monoxide emissions data;

iv. Municipal waste combustor unit load data; and

v. Particulate matter control device temperature data.

g. Identification of each occurrence that sulfur dioxide emissions data, nitrogen oxides emissions data, or operational data (i.e., carbon monoxide emissions, unit load, and particulate matter control device temperature) have been excluded from the calculation of average emission concentrations or parameters, and the reasons for excluding the data.

h. The results of daily drift tests and quarterly accuracy determinations for sulfur dioxide, nitrogen oxides (large municipal waste combustors only), and carbon monoxide continuous emission monitoring systems, as required under appendix F of 40 CFR 60, procedure 1.

i. The continuous emission monitor system records shall be annotated to identify the municipal waste combustor train, dates, light-off and securing times, and average firing rates.

j. All emission stack test reports.

k. A copy of the maintenance schedule and records of scheduled and unscheduled maintenance and operator training, in accordance with Condition 18.

l. All documents required to demonstrate compliance with the approved MRP in Appendix A.

(9 VAC 5-80-1180 and 9 VAC 5-50-50)

GENERAL CONDITIONS

15. Certification of Documents

A. The following documents submitted to the Board shall be signed by a responsible official: (i) any emission statement, application, form, report, or compliance certification; (ii) any document required to be signed by any provision of the regulations of the Board; or (iii) any other document containing emissions data or compliance information the owner wishes the Board to consider in the administration of its air quality programs. A responsible official is defined as follows:

1. For a business entity, such as a corporation, association or cooperative, a responsible official is either:

    a. The president, secretary, treasurer, or a vice president of the business entity in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the business entity; or

    b. A duly authorized representative of such business entity if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either (i) the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars) or (ii) the authority to sign documents has been assigned or delegated to such representative in accordance with procedures of the business entity.

2. For a partnership or sole proprietorship, a responsible official is a general partner or the proprietor, respectively.

3. For a municipality, state, federal, or other public agency, a responsible official is either a principal executive officer or ranking elected official. A principal executive officer of a federal agency includes the chief executive officer having responsibility for the overall operations of the principal geographic unit of the agency.

B. Any person signing a document under subsection A above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering and evaluating the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

C. Subsection B shall be interpreted to mean that the signer must have some form of direction or supervision over the persons gathering the data and preparing the document (the preparers), although the signer need not personally nor directly supervise these activities. The signer need not be in the same line of authority as the preparers, or do the persons gathering the form need to be employees (e.g., outside contractors can be used). It is sufficient that the signer has authority to assure that the necessary actions are taken to prepare a complete and accurate document.

(9 VAC 5-20-230)

16. **Permit Suspension/Revocation** - This permit may be suspended or revoked if the permittee:

    a. Knowingly makes material misstatements in the permit application or any amendments to it;

    b. Fails to comply with the conditions of this permit;

    c. Fails to comply with any emission standards applicable to a permitted emissions unit, included in this permit;

    d. Causes emissions from the stationary source which result in violations of, or interfere with the attainment and maintenance of, any ambient air quality standard; or

    e. Fails to operate in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect at the time an application for this permit is submitted.

    (9 VAC 5-80-1210 F)

17. **Right of Entry** - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

    a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

    b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;

    c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and

    d. To sample or test at reasonable times.

    For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.
    (9 VAC 5-170-130 and 9 VAC 5-80-1180)

18. **Maintenance/Operating Procedures** – At all times, including periods of start-up, shutdown, soot blowing, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment and process equipment which affect such emissions:

a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.

b. Maintain an inventory of spare parts.

c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures, prior to their first operation of such equipment. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.
(9 VAC 5-50-20 E and 9 VAC 5-80-1180 D)

19. **Record of Malfunctions** – The permittee shall maintain records of the occurrence and duration of any bypass, malfunction, shutdown or failure of the facility or its associated air pollution control equipment that results in excess emissions for more than one hour. Records shall include the date, time, duration, description (emission unit, pollutant affected, cause of malfunction), corrective action, preventive measures taken and name of person generating the record.
(9 VAC 5-20-180 J and 9 VAC 5-80-1180 D)

20. **Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Regional Air Compliance Manager of the DEQ's NRO (at the address referenced in Condition 13) of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone, email, or telegraph. Excess emissions for NO_x, SO_2 and CO for more than one hour shall be based on the averaging periods specified in 9 VAC 5-40-7950 et al and the emission limits specified in Condition 10. Such notification shall be made as soon as practicable but no later than four daytime business hours after the malfunction is discovered.

The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of the occurrence. Owners who are subject to the requirements of 9 VAC 5-40-50C and 9 VAC 5-50-50C, are not required to provide the written statement prescribed in this permit condition for facilities which are subject to the monitoring requirements of 9 VAC 5-40-40 and 9 VAC 5-50-40. 9 VAC 5-40-50C states that:

"Each owner required to install a continuous monitoring system shall submit a written report of excess emissions (as defined in the applicable emission standard) to the board for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter and shall include the following information:

a. The magnitude of excess emissions computed in accordance with 9 VAC 5-40-41B6, any conversion factors used, and the date and time of commencement and completion of each period of excess emissions;

b. Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the source. The nature and cause of any malfunction (if known), the corrective action taken or preventative measure adopted;

c. The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments; and

d. When no excess emissions have occurred or the continuous monitoring system have not been inoperative, repaired or adjusted, such information shall be stated in the report."

When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Regional Air Compliance Manager of the DEQ's NRO in writing.
(9 VAC 5-20-180 C, 9 VAC 5-40-50C, and 9 VAC 5-80-1180)

21. **Notification for Control Equipment Maintenance** - The permittee shall furnish notification to the Regional Air Compliance Manager of the DEQ's NRO (at the address referenced in Condition 13) of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least twenty-four hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;

b. The expected length of time that the air pollution control equipment will be out of service;

c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;

d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage.

(9 VAC 5-20-180 B)

22. **Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
(9 VAC 5-20-180 I and 9 VAC 5-80-1180)

23. **Change of Ownership** - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Regional Air Compliance Manager of the DEQ's NRO (at the address referenced in Condition 13) of the change of ownership within thirty days of the transfer.
(9 VAC 5-80-1240)

24. **Permit Copy** - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.
(9 VAC 5-80-1180)

STATE-ONLY ENFORCEABLE REQUIREMENTS

25. Emissions from the operation of each municipal waste combustor shall not exceed the limitations specified below:

	lb/MMBtu	tons/yr
Antimony	3.3×10^{-4}	0.175
Arsenic	7.6×10^{-5}	0.04
Hydrogen Bromide	6.0×10^{-2}	31.97
Hydrogen Fluoride	3.2×10^{-3}	1.74

(9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280 and 9 VAC 5-60-220)

26. Emissions from the operation of the facility shall not exceed the limitations specified below:

	tons/yr
Antimony	0.53
Arsenic	0.12
Hydrogen Bromide	95.91
Hydrogen Fluoride	5.2

(9 VAC 5-50-260, 9 VAC 5-50-270, 9 VAC 5-50-280 and 9 VAC 5-60-220)

27. Covanta Alexandria/Arlington, Inc. shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Regional Air Compliance Manager of the DEQ's NRO. These records shall include, but are not limited to:

a. Stack test results demonstrating compliance with hydrogen fluoride, antimony, arsenic and hydrogen bromide emissions limits.

These records shall be available on-site for inspection by the DEQ.
(9 VAC 5-80-1180 and 9 VAC 5-50-50)

APPENDIX A

MATERIAL REVIEW PROCESS